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ABSTRACT

This monograph is part of OPTIONS, a packaged set of materials developed to provide postsecondary administrators, program planners, curriculum developers, counselors, and instructors with up-to-date, reliable information. This volume and two other monographs are intended to enable counselors and instructors to establish and conduct special services to meet the learning and career needs of adult populations. This publication provides the literacy enhancement program planner with the demographic information, program development considerations, and remediation strategies needed to implement a successful program. Part I discusses the characteristics of illiterate speakers of English. An examination of employers' literacy competency needs results in a checklist of literacy competencies required for entry-level employment and for career advancement. Guidelines for assessing the basic skills of literacy program clients are presented along with criteria for selecting instructional materials most appropriate to the needs of the program's clients. Two models for the development of a literacy enhancement program are outlined. Part II considers planning and implementing programs of literacy instruction for nonnative speakers of English in a vocational context. Brief descriptions of various types of English-as-a-second-language (ESL) programs and a model for vocational ESL delivery are given. Part II then presents an overview of the latest and most successful strategies being used in vocational education. (YLB)

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OPTIONS
Expanding Educational Services for Adults

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY

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LITERACY ENHANCEMENT FOR ADULTS

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FOREWORD

Postsecondary education faces major challenges for the future if it is going to remain responsive to changes in the areas of demography, labor, economy, and societal expectations. If postsecondary education is to remain relevant, new programs to meet changing technological needs must be developed; increased sensitivity to the changing age, sex, and ethnic composition of the student population must be demonstrated; more training designed for part-time participants and for disadvantaged groups must be offered; and increased cooperation between business and educational institutions must be achieved.

In order to provide postsecondary administrators, program planners, curriculum developers, counselors, and instructors with up-to-date, reliable information, the National Center has developed a packaged set of materials entitled *OPTIONS: Expanding Educational Services for Adults*. This package is the result of a major review and synthesis of the premiere appropriate materials available. Organized around three highly targeted issues, the *OPTIONS* package contains an educator's guide, a videotape, three books, and three monographs.

The *Educator's Guide* orients administrators, instructors, and counselors to *OPTIONS*--its background, philosophy, components, structure, and use. An accompanying videotape discusses the issues and forces impacting on educational institutions serving adults and motivates postsecondary personnel to work for program success.

Linking with Employers provides a rationale for cooperative efforts with business and industry. This book describes procedures for establishing linkages and conducting programs such as co-op education, customized training, retraining and upgrading, apprenticeship, resource sharing, and economic development.

Developing Curriculum in Response to Change prepares program staff to design and adapt curricula to conform to technological changes in the workplace and to meet the learning needs of adults. This book discusses the six-stage process of curriculum development: assessing needs, defining objectives, identifying resources, developing curriculum content, implementing the curriculum, and monitoring and evaluating implementation.

The three monographs enable counselors and instructors to establish and conduct special services to meet the learning and career needs of adult populations. *Adult Career Guidance* prepares counselors to provide intake, assessment, employability skill development, and career guidance to multicultural, handicapped, and older adults, as well as dislocated workers and women reentering the work force. *Entrepreneurship Education* provides models for planning and implementing an entrepreneurship education program for adults. This publication, *Literacy Enhancement for Adults*, provides models for planning and implementing adult literacy programs.

Case Studies of Programs Serving Adults describes exemplary practices and programs that have successfully improved or expanded educational services for adults. This book integrates the three major foci of linking with employers, developing curriculum in response to change, and providing special services for adults.

The National Center wishes to acknowledge the leadership provided to this effort by Dr. Robert E. Taylor, recently retired Executive Director. Appreciation also is extended to the following individuals who served as a panel of experts in assisting staff in planning strategy, recommending document content, and critically reviewing drafts of the documents: Dr. Larry Hackney, Associate Dean of Counseling and Life Career Development, Macomb Community College; Dr. Ronald M. Hutkin, Vice President of Academic Affairs, North Dakota State School of Science; Dr. H. James Owen, President, Tri-Cities State Technical Institute; and Dr. Roger Perry, Vice President of Academic Affairs, Champlain College.

Special recognition is due to James O. Belcher and Catharine P. Warmbrod who prepared this monograph. Recognition and appreciation is deserved by the following National Center staff who played major individual roles in the development of the *OPTIONS* package: Richard J. Miguel, Associate Director for Applied Research and Development, and Catharine P. Warmbrod, Research Specialist 2 and Project Director, for leadership and direction of the project; Judith A. Samuelson, Research Specialist 2; James O. Belcher, Program Associate; Roxi A. Liming, Program Assistant; and David J. Kalamas, Graduate Research Associate, for synthesizing and developing the documents; and Monyeene Elliott, for her word processing expertise and dedication to a major typing endeavor. Appreciation is extended to Judy Balogh and her staff for providing final editorial review of the documents.

Chester K. Hansen
Acting Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

Estimates of the number of illiterate and marginally literate persons in the United States run upward of 60 million, with 2 to 3 million more literacy-disabled persons entering the work force each year. In terms of lost wages, productivity, and dollars spent on literacy enhancement programs for adults by business and government, the cost of literacy is estimated to run into the hundreds of billions of dollars. The personal costs of illiteracy are inestimable in terms of the disadvantages suffered by illiterate adults and their families. Clearly, there is no quick solution to the problem of adult illiteracy.

This monograph provides the literacy enhancement program planner with the demographic information, program development considerations, and remediation strategies needed to implement a successful program. The strategies presented herein are the fruits of research and synthesis efforts conducted by the National Center for Research in Vocational Education. The aim has been to identify programs that are needed and then programs that have worked.

Once the societal aspects of illiteracy are separated from the discussion, one must begin to deal with the linguistic aspects. In a very broad sense, literacy may be viewed as the ability to read and write; the use of a language is inferred. This immediately raises the question of illiteracy per se versus cross-cultural illiteracy. The literacy needs of a non-English-speaking refugee or immigrant who already knows *how to read* some other language(s) are substantially different from the needs of a native speaker of English who is intimately familiar with English syntax (and to a lesser extent, English grammar) but *does not know how to read*. (A third major category, of course, would be the non-English-speaking client who lacks literacy skills in any other language.) In many cases, remediation strategies differ in native speaker and nonnative speaker literacy classes, and the clientele is likely to remain separate; therefore, this publication is divided into two parts. The first part addresses programs for native speakers; the second for nonnative speakers.

Part I of this monograph begins with a discussion of the characteristics of illiterate speakers of English. Next, the literacy competency needs of employers are examined resulting in a checklist of literacy competencies required for entry-level employment and for career advancement. Guidelines for assessing the basic skills of literacy program clients are presented along with criteria for selecting instructional materials most appropriate to the needs of the program's clients. Part I ends with an outline of two models for the development of a literacy enhancement program.

Part II is devoted to planning and implementing programs of literacy instruction for nonnative speakers of English in a vocational context. Brief descriptions of various types of English-as-a-second-language (ESL) programs and a model for vocational ESL delivery are given. Part II then presents an overview of the latest and most successful strategies being used in vocational education.

Introduction

Millions of adult American workers lack the necessary literacy skills--reading, writing, and mathematics--to perform effectively or to advance in their jobs. Estimates of the number of American illiterate adults who are capable of being productive workers have grown from 23 million functionally illiterate and 34 million marginally literate in the 1970s to as many as 30 million functionally incompetent and 54 million marginally literate today. Regardless of the criteria used to distinguish functional illiteracy, no one's updated figure of "functional" and "marginal" combined is less than 60 million (Kozol 1985).

Illiterate adults have placed and continue to place a heavy burden on private industry's productivity. These adults cannot read shipping labels or directions, they have trouble weighing boxes and recording fractions, and they have difficulty communicating with their supervisor and each other. Today's employees must not only perform their work proficiently without fundamental support from others, but also be adaptable to new assignments. Their adaptability requires a range of basic skills.

Harman (1985) suggests that the concept of literacy includes correct speech, spelling, arithmetic, and knowledge about topics and fields that are thought to be of central importance. Indeed, the terms "literacy" and "basic skills" are often used interchangeably. Each industry must determine for itself what is "basic" for performance on the job. No magical list of literacy competencies suitable for many industries exists. Scribner and Cole (1981) suggest that "the representation of literacy as a fixed inventory of skills that can be assessed outside of their contexts of application has little utility for educational policies" (p. 25). Industry-by-industry assessments of basic skill needs are necessary.

Close cooperation with public education and labor unions could result in programs to help workers with out-of-date skills assume new roles in America's technologically advanced society. Rosemarie J. Park (1984), a professor of education at the University of Minnesota, has written that "the retraining of American industry for high technology is well underway, but the effort could be doomed to failure because of widespread illiteracy" (p. 77).

Despite efforts to curb it, illiteracy is a growing problem. Each year, an estimated 2.3 million persons join the pool of those adults considered to be functionally illiterate. This group includes high school dropouts and "pushouts" (students who become discouraged by a perceived lack of meaningful programs or administrative support), legal and illegal immigrants, refugees, and others with limited English proficiency (U.S. Department of Education n.d.). These adults become a part of a complex and costly problem. One estimate places the yearly cost in welfare programs and unemployment compensation at $6 billion (Wellborn 1982). The cost is high in other terms as well. Illiteracy limits productivity in human terms. It results in

frustrated workers trapped in dead-end jobs, unable to advance. Half of the nation's prison population is illiterate, and 85 percent of the youths who appear in juvenile court are disabled readers. Crime and its related costs, including imprisonment, income lost to the prisoner, law enforcement and court costs, and welfare benefits to prisoners' families, are a tremendous drain on the nation's resources. The National Coalition for Literacy believes that the national bill for adult illiteracy exceeds $225 billion annually when lost industrial productivity, unrealized tax revenues, and remedial reading training by business and the military are added into the total. The U.S. Armed Services alone spends $70 million each year to teach basic education to recruits.

According to U.S. Department of Labor estimates, at least half of all unemployed Americans are functionally illiterate. Of the nation's 9 million unemployed, a large percentage lacks self-motivation, self-confidence and basic reading, computation, and interpersonal communication skills that are critical to finding a job or getting a better one. The problem is especially severe among minorities: as many as 56 percent of Hispanic and 47 percent of black 17-year-olds are currently functionally illiterate. About 16 percent of white 17-year-olds suffer from this disability.

Individuals lacking basic literacy skills will always be at a disadvantage in the job market and will be effectively locked out of tomorrow's technological economy. Labor market projections suggest that the number of jobs for unskilled and semiskilled workers will decrease in the next few years as the use of computers proliferates in factories and offices. Although not all unemployed persons find themselves jobless due to an inadequate education, those with less education tend to be the last hired and the first fired.

Greater educational attainment also yields higher income. Incomes among high school graduates are double the incomes of those who have not completed grade school. Census data indicate that, even among people holding the same kind of job, those with higher educational levels earn higher salaries.

Another effect of illiteracy is apparent in the disproportionate percentage of functionally illiterate persons receiving public welfare. For men and women, blacks and whites, and all age groups, a common denominator among welfare recipients is their low level of educational attainment. The proportion of persons on public assistance who have fewer than 6 years of schooling is more than double that among those with 9 to 11 years of school.

In addition to the price in crime, unemployment, and poverty, functional illiteracy exacts a toll in human suffering. Many basic social forces have perpetuated the problem of illiteracy and will, in the absence of effective interventions, continue to do so. Many individuals, for example, are part of cultural groups in which reading does not play a significant role in obtaining information. Children living in these groups do not read because reading is irrelevant to the out-of-school activities and interactions that comprise a major portion of their existence.

It may be useful here to look into some attempts to define literacy as a starting point for remediation strategies. As noted earlier, literacy is an abstract, relative term that is impossible to define in isolation from a specific time, place, and culture. Literacy, therefore, is described as historically and culturally relative. Illiteracy can be understood only in relation to literacy; it is the absence or lack of literacy rather than a concept with its own set of characteristics and standards. Definitions of literacy share an emphasis on reading, writing, and, usually, computation skills but differ in their descriptions of the extent of skill and the criteria for application. Therefore, statistics on the amount of illiteracy vary, generally due to the use of different definitions and related ways of measuring, or counting, illiterate adults. Literacy is a social construct rather than

an act of nature (Bormuth 1973). Hunter and Harman (1979) observe that

> clear and agreed-upon concepts and definitions of literacy--who it is and how it can be measured--do not exist. As a result, even the limited statistics and other data available about the problem fall far short of what is needed and are often confusing if not downright contradictory. (p. 103)

In any event, 54 to 64 million Americans suffer from illiteracy because of limited education. Unfortunately, as Hunter and Harman point out, only 2 to 4 percent of these people ever enter publicly funded literacy programs to promote secondary school-level skills. Many people can function without much formal schooling, say Hunter and Harman (1979), ". . . nonetheless, an enormous gap remains between the number who seek help and those who need it. This gap has important implications both for policies and programs" (p. 103).

The seven chapters of this monograph reflect the extensive research and information base of the National Center for Reserch in Vocational Education. The materials included are intended to provide the demographic, planning, and implementation information that will be needed by the planners and instructors of adult literacy enhancement programs in vocational and technical postsecondary institutions. The original source documents used to compile this monograph consist of research reports, policy papers, and program planning guides; a complete listing is to be found under "Source Documents" in the back of this publication. Naturally, modifications in the excerpted materials were necessary; it was necessary also, for the sake of brevity, to exclude material that may be of interest to users of this document. Persons interested in purchasing any or all of the original source documents may do so by contacting the Program Information Office, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, Ohio 43210-1090.

Part I
Literacy Enhancement Programs for Adult Native Speakers of English

Chapter 1
Literacy Education for Adults

Characteristics of Illiterate Adults

A major issue underlying differences in literacy programs is the way literacy educators feel about the characteristics of illiterate adults and the relationship between those characteristics and the purposes of literacy education. Characteristics are not merely objective descriptions of behaviors that are above personal biases or philosophical points of view. There are certain objective realities; it is the interpretation of them that is open to argument.

For example, illiterate adults often describe themselves as concerned about their ability to succeed in a literacy program. This usually is interpreted as a psychological characteristic labeled fear of failure or low self-esteem and is attributed to the individual. Weber (1977) views behavior within the larger framework of a formal educational program and finds that "in (the formal) classrooms it is easy to maintain the unequal power relations between teacher and learner that nurture the stereotype of the adult literacy student as low in self-esteem, reluctant to take risks and concerned whether to use English correctly or not at all" (p. 246). Rather than viewing the observed behavior as a psychological characteristic, Weber sees it as created by the interaction between the characteristics of the situation and the learners.

Educators in literacy programs have been influenced deeply by the perspective emerging from the War on Poverty in the 1960s, which portrayed individuals as embedded in a culture of poverty (Lewis 1959). The culture-of-poverty approach has been labeled a deficit perspective in which middle-class culture is established as the norm and other cultures are judged against its characteristics. The deficit perspective has been criticized extensively, but its prevalence in the literature is striking. Many authors cite the fact that illiterate adults bring a wealth of experience and a fully developed language system to the teaching-learning interaction; however, fear of failure, low self-esteem and self-confidence, resistance to change, lack of future orientation, inarticulateness, fatalism, inability to cope or to think abstractly, and apathy are mentioned much more often. The disadvantaged are portrayed as poor financial planners, parents, housekeepers, friends, and spouses.

Some educators have claimed that illiteracy is the result of social structural inequities and class discrimination. Schooling was not provided, was of inferior quality, or was simply unresponsive to the cultural characteristics of children who differed from the middle class. The specific characteristics of illiterate adults became inconsequential in this primarily structural analysis, and literacy programs are created to increase access to educational opportunities; individuals were not responsible for their illiteracy. If the culture-of-poverty model is seen as laying

all of the responsibility for illiteracy at the feet of the illiterate adults, this model represents a swing to the other end of the continuum, where the larger society is seen as fully responsible.

Disadvantage certainly exists in modern American society; there is an unequal distribution of opportunity, power, and resources. Many illiterate adults also are poor and must deal with increased levels of stress (Brown 1977) and physiological complications from inadequate nutrition that influence their ability to learn. Literacy educators in the past worked from the information available at the time, but now they appear to be recognizing that simple explanations and one-dimensional models of illiteracy or poverty do not suffice. Jones (1981) writes that it is dangerous and misleading to view the disadvantaged entirely from a deficit perspective. There are indications that many disadvantaged persons are more purposeful than most of the earlier deficit-oriented literature suggested.

Alternatives are beginning to emerge, particularly as illiterate adults themselves are provided with an opportunity to share their perspectives through qualitative studies. Eberle and Robinson (1980) present extensive interview data in which illiterate adults describe the myths and the realities of illiteracy in contemporary American life. Sisco (1983) points to evidence that many adults who may have little or no schooling have nonetheless educated themselves through their life experiences. Brockett (1983) raises questions about possible cultural bias in research instruments used to measure illiterate adults' abilities to learn. Fitzgerald (1984) suggests that the lack of motivation attributed to illiterate adults who do not enroll in literacy programs may be due to the fact that many illiterate adults do not believe that literacy will solve their problems.

Fingeret (1982) presents interview data in which illiterate adults describe their frustrations with the attitudes of educators and discuss their own aspirations and accomplishments. Fingeret argues that illiterate adults should be seen as members of oral subcultures, with their own set of values and beliefs, rather than as failing members of the dominant literate culture. She finds that illiterate adults see themselves, often, as interdependent, rather than dependent, sharing their skills and knowledge with members of their social networks in return for access to the reading and writing skills of friends, neighbors, and relatives. In addition, Fingeret claims that many illiterate adults possess common sense, an ability to abstract and analyze that often is downgraded by the larger society in favor of more scientific deductive logic.

When illiterate adults are seen as participating in some alternative culture in which literacy is not as central as it is to the dominant culture, the causes of illiteracy are culturally related. However, the alternative culture is not necessarily bad. This view respects the dignity and power of individuals through whose eyes the culture is viewed. It also must be recognized that the development of an alternative culture is the result of interaction with a larger society that may be structured to deny opportunities to those who differ from the middle class. When the problem is conceptualized as this kind of interaction between structural and cultural factors, the response may be programs that combine a critical awareness of these social and political realities on the part of the illiterate adults (empowerment) in order to bring about political and social change.

The roles of educators correspond to the broader notions of the purposes of literacy education. In empowerment and social change models the educator is depicted as a facilitator and change agent; in personal development models the educator is depicted as an instructor and counselor. The educator may be viewed as a representative of the status quo and an implementer of social policy or as a participant, with students, in the creation of new social relationships. Literacy education is portrayed by some as an apolitical process and by others as a highly politicized endeavor. Clearly,

literacy education involves influencing the relationship between the individual and society. Paulo Freire (1970), an influential philosopher of literacy education, stresses that education is a political act regardless of an individual's willingness to admit the fact.

Strategies for Teaching Adult Basic Skills

McCullough (1981) explains the origin of strategies used by adult basic skill instructors in the following way:

> Adult basic education, like some other educational programs, does not have its own specific learning theory. What has appeared workable in theory has been adapted and adopted by ABE instructors, and what has emerged is an eclectic body of theory loosely called adult learning theory. A good example is J. Roby Kidd's book, *How Adults Learn*. . . . Adult basic education is a field of practice, not a field of research, encompassing an array of strategies gathered from theories found most applicable to adults. (p. 66)

Elsewhere, McCullough writes that an adult basic skill instructor's personal qualities are more important than academic or technical competence.

> They [adult basic skill instructors] are nearer to counselors as a profession than they are to stereotypical classroom teachers. Their relationship to the learner is a predominantly helping one and their expertise is more in process than in content. They must be able to analyze the articulated goals of learners (what learners *want* to achieve) and determine what learners *need* to reach their goals. Instructors must be able to develop specific objectives for each need, create instructional sequences for each objective, and help learners through the sequences with efficient learning strategies. . . . Simultaneously, they must also assess and reassess each step of the process, and constantly strive to maintain the morale and perseverance of each person involved. (p. 60)

In many ways the characteristics of adult basic skill students help to explain why certain learning strategies are used in vocational education institutions and what makes them efficient to use. Even with the recent influx of dislocated workers into ABE classes, one key feature of adult basic skill students is that they typically are educationally, culturally, socially, or economically disadvantaged. This population frequently suffers physical disadvantages due to undiagnosed ailments. Dental, visual, and hearing problems and learning disabilities are the most common physical impairments and help to explain why previous educational efforts were aborted or were unsuccessful (Ulmer 1969).

When one takes these physical barriers to learning into account, it seems quite remarkable that these students are motivated to try again. Indeed, adult basic skill and ESL students are usually highly motivated but can become easily frustrated. Therefore, it is important that adult basic skill and ESL instructors recognize the advantages and disadvantages of being an adult student and play to the strengths in the instructional strategies used.

Ulmer (1969) outlines the strengths and weaknesses that adult basic skills students pose. Perhaps the greatest barriers outside of physical problems are the anxiety and lack of confidence that these adults feel toward classroom learning. Such anxiety may be reinforced by the perception that adults are too old to benefit from instruction. Admittedly, there commonly is a resistance in adults to change, but it is more of a psychological nature

than a biological one. Also, until disadvantaged adults have time to adjust, mental learning activities may seem more difficult than they really are because these adults are typically accustomed to physical work. In older adults response time maybe slower thereby demanding more time for synthesis and analysis tasks.

Years of discouragement may serve to limit these adults' educational goals. An individual who is uprooted from a laborer's job after 15 years may have a hard time thinking of another job for which to retrain. Others may seek only the immediate goal of passing the General Equivalency Diploma (GED). Those who attend adult basic skill classes at a vocational education institution, such as a community college, tend to have a vocational training goal in mind.

Despite these disadvantages, adult basic skill students bring some powerful assets to the learning situation. These adults have been educated by experience. Accumulated practical knowledge may even outweigh that of an instructor who is younger. Furthermore, these adults know why they are studying basic skills. They have come voluntarily or out of necessity and can usually compensate for any limitations by the following strengths: single-mindedness of purpose, self-control, endurance, and the ability to pace themselves and use their resources efficiently.

The following sections highlight the common strategies that are advocated by vocational education institutions to teach adult basic skills. It is recommended that the instructor accept the following priorities: first, be a friend; second, be a counselor; and third, be a teacher. The instructor must empathize with each adult student, believe in the good and potential in everyone, draw on experiences that the adult student will understand, become aware of individual problems, and address them before attempting instruction.

Individualized Instruction

The most important strategy in teaching adult basic skills is individualizing instruction. To individualize instruction is to do a variety of things. First, it means designing lessons to meet each student's stated goal. It also means providing for learning to be self-paced. Self-paced instruction allows the timing of learning to be flexible. The adult student determines when to learn and the duration of study. The student is in charge of the subject studied as well as the correction and grading of exercises. In other words, adult students retain the ultimate decision-making responsibility for their own education.

The instructor acts as a resource person and a directive guide within the educational environment by providing the instruction in small, short steps so as not to frustrate the student. Direct access and continuous contact with students enhance this process.

Individualizing learning calls for some structure. Testing at the completion of vital skill areas is most important to the instructor's management of the process. Accurate record keeping by both instructor and student is necessary. Instructors give some type of written guideline for each student to follow to note direction and progress. Continual conferences occur to update, teach, and guide the student. These conferences are informal. During study times, the instructor indicates availability by walking around the classroom and passing near each student.

Individualizing instruction means flexibility of the beginning and ending of study time and entry and exit for the program. When group instruction is offered, it is optional for the student to participate. Whenever possible, trained volunteer tutors can be a tremendous help to the student who is struggling and finding it hard to study a particular area independently.

Performance-Based Processes

It is sometimes hard to say who is helped more by the presence of behavioral objectives--the teacher or the student. No doubt they can help reinforce the purpose of a given learning experience. The important thing instructors must remember is that it is not enough for objectives to be printed in the text. Too often students do not read printed objectives, so it helps to go over objectives orally with them. Further, objectives need to be explained to adult students so they know how the objectives will help them meet individual goals. Instructors then need to reiterate objectives and their rationales during subsequent conferences as needed. Also, measurable terms may need adjustment to ensure mastery for different individuals.

Review and Reinforcement

For each student, planned review and reinforcement of skills must be built into the individual's educational plan. This procedure aids students in maintaining their mastery level until a particular program goal is reached. Review and reinforcement also help students maintain the confidence necessary to attain program goals.

Pre- and Post-Tests

Upon entry into a remedial program, adults are usually tested to access their skills and their education needs for their stated goals. Reading-level information is necessary for all adult basic skill preparation. Math skills are also vital to most technical training. Other basic skills vary in importance to particular vocational training areas.

Pretests can be standardized, or sometimes instructor designed. It is possible, for example, to determine informally whether a student is a reader or a non-reader. Care must be taken with pretests so as not to reinforce failure.

Posttests are often available commercially for use at the end of certain texts. It is important for the instructor to build in some testing after completion of intermediate tasks. This procedure allows for quick intervention by the instructor when a problem of skill mastery first appears. It also aids in the development of the students' confidence as they complete tasks and move on to more difficult ones. Textbook posttests act then as a review instrument for a holistic view of the student's mastery of skills.

The posttest or mastery test is taken by students at their choice. Sometimes the instructor may encourage the decision, but teacher or group pressure should never force it. To be consistent with self-pacing, instructors do not build time limits into the program for attaining mastery of a certain skill. When students can demonstrate mastery of a certain skill, they move to the next higher skill or a new skill area.

Successful Experiences

It is imperative that students have opportunities for built-in success experiences. For this reason, adult basic skill instructors start with review of a fairly well known skill before moving to a more difficult one. They also plan instruction in many short units rather than a few long ones.

Another way to carry out this strategy is in handling reading levels. When teaching a new or undeveloped basic skill, instructors lower the difficulty in instructional material at least two reading levels and gradually build. They can also read directions aloud so that students don't have to rely on reading them.

Instructors can also gear tests for success. First of all, students request a test or quiz when they feel competent to take it. If a student does not pass a test, instructors can excuse the student

from sections that were completed satisfactorily. Students then review only problem areas with or without instructor assistance before retesting. The key here is to minimize mistakes and accent the positive.

Applicable and Relevant Class Work

Adults are rarely receptive to an activity that appears to them to be busywork. A sensitive instructor of adult basic skills devises ways to vary practice drills when learning requires them. At the same time, it is well established that the most efficient learning takes place when an immediate need, or relevance, is perceived. Adult basic skill instructors plan class work in terms of immediate needs.

Individualizing instruction is one way to allow immediate needs to be met. The content of instruction is another. For example, a story on coping with divorce does not necessarily apply to all students, nor would one on buying lumber to build a fence. Unless the adult basic skill training program is a prerequisite or concurrent program devised for a specific vocational audience, it may seem impossible to achieve total relevance in the instructional content. However, total relevance is a goal instructors and content developers should keep in mind.

The dearth of instructional materials that integrate basic skills with specific vocational areas makes this predicament all too clear. However, for problem areas and coping skills, instructors can furnish relevant reading topics, math thought problems, or conversational practice.

Learning Styles

Because of recent research, directing education to a student's particular learning style preference is taking on new significance. Addressing learning styles may be as simple as allowing students to drink coffee or eat while they work in class. It may also entail offering various teaching modes such as working in pairs or groups on projects versus independent discovery.

Aside from environmental factors, instructors also address learning style by providing for different ways in which people process information. Traditional education relies largely on auditory processing of information. Instructors of adult basic skills are beginning to incorporate more creativity by emphasizing other senses in learning whenever possible. With the advent of computer instruction, tactile learning experiences are much more feasible than before. Addressing learning style can show remarkable results with students who are unable to grasp certain skills by traditional means.

Chapter 2
Literacy Competencies for Work

One important result of the recent research into the effectiveness of various literacy programs has been the acceptance of the fact that the ability to write and read statements is of itself no guarantee that an employee will be able to perform satisfactorily on the job or in other situations that demand comprehension of written language. The discussion up to now has grappled with the need to identify illiterate adults in order to provide remediation. The context has been vocational because employment tends to be a major factor in how we perceive ourselves as well as in providing a satisfying lifestyle. The assumption is that if employees or job-seekers with underdeveloped reading and writing skills are able to upgrade their skills, then their self-image will improve along with their job performance. However, just as it was difficult to arrive at a figure for the number of illiterate adults because of the infinite gradations of ability, it is also difficult to formulate specific lists of skills needed to gain entry-level employment or to progress on the job because of the greatly varied requirements among occupations. Nevertheless, a comparison of occupational literacy needs can yield categories of competencies broad and general enough to assist literacy program planners.

The list of skills in exhibit 1 reflects such a survey of desired literacy skills--the skills identified by employers as those needed by hirees to enter and to progress on the job. The survey was published by the National Center for Research in Vocational Education in 1986 under the title *Industrial Literacy Programs: Final Project Report*. The phrase "on the job" is used to denote general working conditions, not a specific occupation or task. "The job" may be a situation such as being upgraded due to the introduction of new equipment. Or it may be a promotion or transfer to another area of work in the company.

The items in the series within some categories, such as mathematics, are sequential. However, a check in the column "to progress" means that employees must learn that skill if they want to advance within the area of a company controlled by a supervisor making the rating. In all cases, the company official responding to this checklist was speaking entirely for himself or herself. No attempt was made to define the occupations under the supervision of the respondent. The checklist represents general knowledge intended to reflect the responding person's estimate of what employees need to know at that particular company.

The checks in exhibit 1, for example, in the math category, indicate a high frequency of positive responses to items. It is important for employees to read, write, and count when entering employment. Also, they must add, subtract, multiply, and divide. However to progress on the job, they must also use fractions and decimals. This empirical knowledge was corroborated by testimony from employees acknowledging the need to know fractions if they were going to operate quality control equipment.

EXHIBIT 1

SKILLS NEEDED BY EMPLOYEES TO ENTER AND PROGRESS ON THE JOB

Skill Categories	Skills needed to	
	Enter	Progress
Mathematics		
Reads, writes, and counts	✓	
Adds, subtracts, multiplies, and divides	✓	
Uses fractions and decimals		✓
Converts fractions to decimals/decimals to fractions		✓
Measures with accuracy using English and/or metric		✓
Solves problems using numbers, fractions, and decimals		✓
Estimates areas or values		✓
Uses a calculator		
Reading		
Pronounces consonants and vowels correctly		
Pronounces syllables correctly		
Pronounces each word correctly		
Discriminates among visual words		
Reads for facts and information		
Follows written instructions	✓	✓
Reads for ideas, logic, and meaning		✓
Draws conclusions from statements read		✓
Detects bias and inconsistencies		✓
Writing		
Knows letters of alphabet		
Can copy texts		
Capitalizes words correctly		✓
Spells correctly		
Puncutates with commas, colons, semicolons, dashes, quotation marks correctly		✓
Writes legibly	✓	✓
Uses correct grammar		✓
Writes sentences, paragraphs		
Writes letters, reports, messages		
Completes forms and applications	✓	
Signs forms appropriately	✓	✓
Writes dates and times	✓	

Skill Categories	Skills needed to	
	Enter	Progress
Listening		
Identifies procedures to follow	✓	✓
Understands concepts, technical information		✓
Is attentive	✓	✓
Identifies the main idea from a speech		
Draws conclusions		✓
Applies information learned	✓	✓
Identifies additional information needed		✓
Distinguishes relationships		✓
Speaking		
Selects words appropriately		✓
Vocabulary is adequate		✓
Speaks face to face	✓	✓
Uses telephone well		
Gives information/directions clearly		✓

SOURCE: Hull, Fields, and Sechler 1986.

As the reader will note from the check marks under mathematics in exhibit 1, the skills of converting fractions, measuring with accuracy, and solving problems using numbers were recognized as important abilities if a person is to advance in the companies surveyed. The electronics firms and other high-tech organizations needed additional pretechnical skills such as algebra as prerequisites to highly skilled tasks. In at least one case, mechanical hand dexterity was viewed as an important prerequisite to measuring correctly.

The reading skills considered most important on the job were those associated with reasoning and logic; they were viewed as most important for persons likely to progress in the company. One skill specifically indicated as important to beginning employment was following written instructions.

Being able to read safety signs and to understand prints and engineering materials was specifically mentioned by a supervisor at one company. Interestingly, fewer proportions of reading skills were marked as needed by respondents than the other categories, yet all of the respondents were teaching reading. It may be that they assumed the prerequisite skill of pronouncing syllables correctly, for example, was subsumed by other skills further down the list. Indeed, the list had been constructed for sequential learning of skills within each category.

The writing skills received differentiated scoring from the respondents. Employees need to be able to spell, punctuate, use sentences and paragraphs correctly, and to sign forms appropriately to progress on the job. The common requirements for entry-level employees were signing forms and legible handwriting. Most of the assessments for hiring beginning-level employees consisted of completing forms accurately. In the high-tech companies, technical writing was necessary for employees who were drafting reports for engineers.

Listening skills were important for both entry-level and advanced-level employees in industry. Virtually all of the skills were identified as necessary to progress on the job. Several company officials emphasized the need for employees to understand instructors. The exception to this was listening for main ideas from a speech.

Plant owners and managers must continue the focus on skill training. The need for technological update is expected to continue. The skills that employees will be required to learn are likely to be higher order, involving problem solving and thinking. Employees must be able to communicate their ideas in this highly coordinated environment. Small companies will have to look to educational agencies to help provide the training services needed. Already, community colleges and technical institutes provide many of the teaching skills needed by these companies. Educators can learn more about the skill needs of businesses in conjunction with these institutions and become more flexible and adaptable in meeting basic skills needs. The future points to the rise in industry-based literacy programs; they are likely to continue as a primary need in American industry for many years to come.

Chapter 3
Assessment of Students' Basic Skills

There are two purposes for basic skills assessment: (1) to determine whether an individual has the necessary basic skills to succeed in a given job and (2) to provide sufficient diagnostic information to guide basic skill remediation. (Note: The matter of assessing the basic skills of adults whose first language is not English and who are not proficient in English will be discussed in considerable detail in part II of this publication.)

Because there are numerous assessment instruments to choose from it is recommended that criteria be established for the selection of instruments. Although criteria will vary as to the specific needs of a given program, Robertson (1983) has proposed what he calls the "Characteristics of an Ideal Occupational Basic Skills Assessment Instrument." The characteristics are based upon his extensive survey of assessment for occupational training. He cautions that no single test will meet all of the characteristics. The criteria are as follows:

- The instrument should contain sufficient items to give a valid measure of adults performing at a low level of functional skills regardless of their ages or involvement in adult or postsecondary occupational programs.

- The instrument should contain sufficient test items to give a valid measure of the upper levels of basic skill performance for a variety of programs. It should also be applicable to 2-year colleges or secondary technical education programs requiring advanced reading or math skills.

- The instrument should contain sufficient test items to reflect the specific basic skills needed in order to function in a variety of occupational education or work settings. Reading passages should be either specifically or generally occupationally referenced, or at least be expressed in terms reflecting life functional basic skills.

- Test scores should indicate mastery of a specific basic skill or indicate a functional competency level in this basic skill. If test subscores are referenced to specific occupational program clusters of performance levels, so much the better.

- Test scoring should provide for a diagnostic analysis of test items to aid in delivery of basic skills instruction and provide an evaluation of subskills within the skill area.

- There should be sufficient information on how the test was constructed and how the test items were selected, validated, and field tested in order to indicate the general quality level of the instrument.

- The test should require neither individual administration nor specialized equipment for local scoring.

- A test score report form should be available that is easily understandable by all staff and clients and that provides opportunities for group score reporting or individual score reporting.

- The test should be readily available when needed.

Since it is beyond the scope of this publication to conduct a review of assessment instruments, the reader is referred to two recent reviews that serve that end--Anderson (1981) and Robertson (1983). Although both reviews are excellent, Robertson focuses specifically on vocational training and tends to have more direct relevance for this document.

Exhibit 2 is offered as a listing of major publishers of assessment instruments. Interested persons may wish to contact these publishers to request product catalogues or other information about basic skills assessment materials.

EXHIBIT 2

PUBLISHER REFERENCES

(1) Addison-Wesley Publishing Company/ETS
116 Belridge Road
Cheshire, CT 06410

(2) The American College Testing Program
P.O. Box 168
Iowa City, IA 52240

(3) Committee on Diagnostic Reading Tests, Inc.
Mountain Home, NC 28785

(4) Cornell Institute for Occupational Education
The New York State College of Agriculture and Life Sciences
Stone Hall
Cornell University
Ithaca, NY 14853

(5) Curriculum Associates
84 Bridge Street
Newton, MA 02158

(6) CTB/McGraw-Hill
1221 Avenue of the Americas
New York, NY 01120

(7) National Assessment Project
Education Commission of the States
1860 Lincoln Street, Suite 700
Denver, CO 08295

(8) Educational and Industrial Testing Service
P.O. Box 7234
San Diego, CA 92107

(9) Educational Testing Service, Inc.
Princeton, NJ 08540

(10) Educators Publishing Service, Inc.
74 Moulton Street
Cambridge, MA 02138

(11) HBJ/Psychological Corporation
757 Third Avenue
New York, NY 10017

(12) Houghton Mifflin Company
Pennington-Hopewell Road
Hopewell, NJ 08525

(13) Jastak Associates, Inc.
1526 Gilpin Avenue
Wilmington, DE 19806

(14) Pleasantville Educational Supply Corp. (SAGE)
21 Paulding Street
Pleasantville, NY 10570

(15) The Riverside Publishing Company (Houghton Mifflin)
1919 South Highland Avenue
Lombard, IL 60148

(16) Science Research Associates, Incorporated
144 North Wacker Drive
Chicago, IL 60606

(17) Scott Foresman and Company
1900 East Lake Avenue
Glenview, IL 60025

SOURCE: Robertson (1983).

Chapter 4
Remedial Instruction for Adults

Questions Guiding the Selection of Instructional Materials

In the interest of helping adults acquire literacy skills for entry into vocational and technical training programs, a review of the information available on instructional materials as well as skill requirements was made by the project staff during the development of *Adult Literacy Skills Required for Training for the Workplace*, which is the source document for this chapter. It was determined that several questions should guide the inquiry concerning instructional materials:

- What and how many instructional materials are available to teach adult basic skills?
- Are instructional materials available to teach all the literacy skills required for adults to enter vocational or technical training?
- Do these materials offer a vocational context?
- What kinds of instructional materials are used in vocational or technical institutions to teach adult basic skills?
- How are instructional materials selected to teach adult basic skills in vocational or technical education institutions? How are they used?

General Characteristics of Adult Basic Skill Instructional Materials

The information in the source document from which this excerpt is drawn is based upon a review of approximately 200 catalogs and other publisher responses, 15 field contacts, and 2 days of consultation with an adult basic education (ABE) coordinator. Based upon this information, the source document presented the following observations about adult basic skill instructional materials.

Cost Range

Materials to teach adult basic skills vary considerably in price. Small soft-cover booklets are available for under $5. Frequently, however, materials consist of several parts combined in a series. These series may contain from 3 to 20 books (usually soft-cover), 1 or more teacher's guides, posters, cassettes, workbooks, and

answer keys. To purchase enough materials for a class, buyers would easily pay $50 to $100 for such a series, and often more. Buyers can keep expenses down in at least two ways. One way is to use consumable materials in a nonconsumable way by having participants write their answers on a sheet of paper. An alternative is to purchase only one copy of a series to use as a reference in developing one's own activities.

Computer and audiovisual materials can be expensive. A program of diskettes or cassettes commonly costs $250. Audiovisual programs with filmstrips and tape cassettes are comparable in price. Occasionally, a computer program is available in conjunction with a specific hardware unit or an audiovisual program that is sold with equipment. These packages cost thousands of dollars.

Availability

Commercial materials are on the market in all adult basic skill areas except for speaking and listening skills. More than one explanation is possible for the paucity of materials designed to teach solely speaking and listening skills. To an extent, listening and speaking skills may be incorporated in materials to teach reading. They may also appear as a chapter or two in language arts materials to teach writing. Certainly greater emphasis is placed on the "three Rs" in adult literacy programs, in part no doubt reflecting the components of the GED exam.

The availability of adult basic skill instructional materials to teach listening and speaking skills may reflect low buyer demand. A growing awareness of the need for workers to have the skills to follow oral directions and speak appropriately over the counter or on the phone may eventually create more demand for these products. Concurrently, the state-of-the-art regarding delineation of specific listening and speaking skills may advance so that publishers can expand curriculum offerings.

Commercial print materials far exceed any other type in number for adult basic skill instruction. Surprisingly, few products of a predominantly audiovisual nature exist for adult basic skill instruction.

Comparison of Commercial and Noncommercial Materials

A number of noncommercial materials exist to teach adult basic skills. These usually are in the form of teacher guides rather than student materials. Sources where such noncommercial products can be obtained are university instructional materials laboratories; national databases such as Vocational Education Curriculum Materials (VECM), Educational Resources Information Center (ERIC), and the National Adult Education Conference (NAEC); and regional curriculum coordination centers as well as state departments of education.

Undoubtedly more commercial materials exist to teach adult basic skills than noncommercial. Commercial materials, unlike noncommercial materials, emphasize student materials that are supported by a teacher's guide. All 15 of the field contacts concurred that programs give priority to purchasing commercial materials, which in turn are supported by teacher-designed activities.

It is hard to know which came first--the demand for or the abundance of student materials to teach adult basic skills. Perhaps the focus on individualization of instruction within the teaching of these skills explains the issue, because commercial student materials offer an efficient way to provide individualized if not self-paced and hands-on instruction. The prevalence of commercial materials in use may also reflect the capacity of commercial publishers to develop fully validated materials at a lower cost than smaller nonprofit organizations can. In addition, commercial products usually have the edge over noncommercial products in terms of streamlined and illustrated formats.

Life-Coping Skills

Several products for teaching adult basic skills emphasize life-coping skills. This is often a reflection of the influence of the adult proficiency level (APL) study conducted at the University of Texas during the 1970s. *Managing Money* by Steck-Vaughn and the *Be Informed Series* by New Reader's Press are two examples. Commercial materials that focus on life-coping skills sometimes fail to deal with basic skill competencies with an equal degree of scope and sequence. It is as though learning coping skills is the end and basic skills are one means to that end rather than the reverse.

One interesting observation made about adult basic skill materials focusing on life-coping skills is that such materials are not very popular with adult students unless they are nonreaders. One wonders whether or not this relates to the students working for a GED more than it does those seeking only to enter vocational or technical training. On the other hand, it may mean that nonreaders are more concerned with life-coping skills since these skills are central to their struggle with illiteracy.

The Vocational and Technical Education Context

Very few materials designed for adult basic skill instruction provide a vocational or technical context. McGraw-Hill Book Company publishes *English at Work* and Longman publishes *Start English for Science*, but both have only a general vocational context. *Welding*, an English-as-a-second-language (ESL) text by Alemany Press, and *Understanding Technical English*, a three-level reading series by Longman, perhaps come the closest to integrating a specific vocational and technical education area with adult basic skill instruction. The products that have a theme of careers may include an activity on how to fill out a job application or speak during an interview, but neither of these activities is going to prepare an adult to enter vocational or technical training successfully.

There are beginning vocational and technical education texts such as Delmar Publishers' *Practical Problems in Mathematics for Electricians* and *Math Principles for Food Service Occupations*. *Practical Problems* may be useful to supplement an electricity course text, however it seems rather advanced for someone with low math skills. Although diagrams and other visuals are frequent, few signs of basic skill text formatting are present. The student is told to review the concepts of addition, multiplication, and so on through a series of problems, but the review process is not spelled out in small steps for the beginner. *Math Principles* contains a 3-unit review of basic math in a 20-unit text. Obviously a review of basic skills is helpful but not sufficient on which to base an adult basic math course. Furthermore, since the first 100 words of the review test out at grade 11 reading level (according to the Gunning Fog Index), this text may be too advanced for many adult basic skill students.

Perhaps publishers believe that it is impractical to focus a whole basic skill text on one occupation, when a more general treatment would make the book appropriate for all students in an adult basic skills class to use. A number of adults enrolled in an ABE class, for example, may be undecided about which career to pursue; they only know that passing the GED is necessary to be hired for many jobs. To them, a text focusing on a specific occupation in a basic skills text might seem to be busywork or irrelevant. Furthermore, the problems put in a vocational context may not reflect the kind of problems asked on the GED exam.

Whatever the reason, the dearth of integrated basic skill, vocational, and technical education texts may be unfortunate. Campbell-Thrane et al. (1983) conclude that "the past several years have shown that higher payoffs from vocational and technical training can be expected when basic skills instruction (principally

remedial) and vocational and technical skills acquisition are functionally tied together" (pp. 1-2).

Kinds of Instructional Materials Used in Vocational and Technical Institutions to Teach Adult Basic Skills

There is considerable variety in the materials used at different vocational and technical institutions to teach adult basic skills. Certain publishers like Steck-Vaughn and New Reader's Press appear on materials lists more than others do because these publishers specialize in functional literacy materials. Even so, instructors are sometimes sharply divided about methodology and which instructional materials work best to teach adult basic skills.

Perhaps the closest to a universal preference that vocational and technical education institutions reach regarding adult basic skill instructional materials is with Bell and Howell's Language Master cards. The Language Master machine appears to be a very popular basic skill teaching tool, offering instruction through more than one learning modality. However, not all vocational or technical institutions use this product.

Another possible reason why no universal preference exists regarding the use of adult basic skill materials relates to the range in price of the materials available and the difference in local funding levels. In the state of Ohio approximately 85 percent of state adult education money is allocated for instruction and 15 percent for administration and equipment. The amount of money that is spent on instructional materials locally can vary from one ABE project to another.

Comparison of the Reliance upon Commercial Materials and Teacher-Made Materials

Vocational and technical education institutions use both commercial and teacher-made materials to teach adult basic skills. The greater the adult basic skill needs, the greater the tendency to rely on commercial materials. Helm and others (1983) have noted that for illiterate adults the "use of commercially prepared materials as a curriculum ensures a logical sequence of skill development" (p. v).

Across the board, however, a prevalence of commercial materials in adult basic skill programs largely depends upon the availability of funds. Community colleges have a different funding base than joint vocational schools or technical institutes. This funding base allows community colleges to support adult basic skills through both continuing and developmental education plus other special projects.

Finances are not the only consideration. As instructors become more experienced, they tend to adapt bits and pieces of curriculum from several sources to customize the adult student's remediation. Also, some instructors find that homemade tactile/kinesthetic materials work very well and are less expensive than many commercial products.

Comparison of the Use of Print Materials and Other Media

Print materials predominate adult basic skills programs within vocational and technical education institutions, (1) because they are abundant, (2) because they are the traditional form of instructional materials, and (3) because they are generally viewed as less expensive. Few classes, however, rely solely on print materials. Audiovisual and computer packages offer valuable instructional alternatives. In a short period of time a large number of computer basic skill materials have become available. The mystique of computers can make basic skill software appealing to adults, regardless of the intended audience. In fact, some computer software catalogs do not specify an age level for their products or say "for any age."

In conclusion, there appears to be a wide diversity among vocational and technical education institutions in the use of print materials versus other media. Factors that determine the success of any approach may include--

- appropriateness of the instructional content in the material for the learning goal,
- type of learning environment provided,
- ease of accessing the material,
- degree of comfort with the materials felt by the instructor and student,
- motivation of the adult student, and
- nature of the skill being taught.

No doubt print materials will continue to be widely used to teach adult basic skills. However, as funds allow, and popularity with adults continues, computerized materials may become increasingly used. They offer self-paced drill and practice without boring the user and they have built-in, frequent feedback--two essential ingredients for effective adult basic skill instruction. Positive interaction with a live instructor, tutor, or facilitator is still crucial to learning, however, especially in regard to communication skills.

Selection Criteria

Given the range of learning needs that adult basic skill students pose and the limited funds for purchasing materials, selection criteria are an important consideration. Ulmer and Dorland (1981) have described how the current situation differs from the early 1960s when materials for teaching illiterate adults were practically nonexistent. They write that "since the late 1960s, the situation has reversed itself to the degree that teachers now need assistance in evaluating materials for use in specific locations and for specific audiences" (p. 14).

Compendium of Sample Criteria

The following compendium of selection criteria for materials was developed from research data gathered during the writing of the source document. It also reflects the views of the project's technical panel of experts. Probably no text exists that meets all of the following criteria. Yet each of these criteria seems reasonable and desirable. By communicating the strengths and weaknesses in commercial offerings, adult basic skill and ESL instructors and coordinators perhaps can help publishers achieve more sophisticated and effective instructional materials.

Basic skills instructional material to prepare an adult to enter vocational training should be--

- Practical
  - Be easily accessible (either from the publisher or outside consultants or trainers).
  - Be reasonably priced considering the scope of instruction.
  - Ensure credibility based on professional recommendation, reviews, testing, and reputation of the author or publisher.
- Methodologically Sound
  - Provide for, or be adaptable to, individualized instruction.
  - Provide for group activities where appropriate.
  - Include a variety of instructional experiences.

- Display a logical sequence within and among learning experiences.

- Reflect one or more of the accepted basic skill teaching strategies (e.g., phonics, language experience).

- Be well paced (e.g., contain a balance between practice exercises and introduction of new content and between achievement opportunity and task challenge).

- Be suitable for independent use (e.g., self-correcting, easily handled, self-paced, and in short segments with the directions clearly stated).

- Provide for appropriate periodic review, evaluation, and feedback regarding progress with the standard for successful completion indicated.

- Allow the use of supplementary materials for students progressing slowly or quickly.

- Encourage further application, study, and growth of basic skills.

• Relevant to Vocational and Technical Training

- Help prepare the adult to cope with vocational and technical training by teaching one or more basic skills identified as necessary for adults to enter training.

- Design adult basic skill instruction so that it pertains or is applicable to a vocational training frame of reference by teaching specific information.

• Well Written

- Maintain a constant readability level or one that increases at a gradual rate throughout the text.

- Ensure a reading level appropriate to the reading level of the individual's need.

- State the reading level and reading scale used.

- Develop content that matches the interests, background, and maturity level of adults.

- State and fulfill goals and objectives within the content at appropriate places.

- Display a clear organization of content.

- Present well-developed concepts.

- Use a direct sentence structure with active rather than passive verbs.

- Use accurate, up-to-date content.

- Ensure clearly marked pre- and post-tests.

- Use language that is sensitive to different cultural backgrounds (e.g., clarify meaning, avoid slang and excessive use of idioms, indicate correct social usage and language style).

- Identify clearly the major points of understanding.

- Present information in an objective and impartial way.

- Be consistent (e.g., vocabulary, instruction, and content).

- Bridge the gap between the abstract and the concrete.

• Well Designed

- Format content appropriately for adults.

- Construct materials so that the covers do not soil easily and the spines do not break easily.

- Ensure that print is easy to read.

- Provide sufficient, compatible, and appealing illustrations.

- Use cues to assist the reader in identifying important aspects of the content.

- Delete labels or marks that state a particular grade level so as not to offend.

- People-Oriented

  - Promote understanding, respect, and acceptance of others (avoiding regional, religious, sexual, age, and class bias).

  - Provide for learner and instructor interaction before, during, and after a learning experience.

  - Provide for a broad range of interests.

  - Provide for, or be adaptable to, different learning styles.

  - Provide for, or be adaptable to, different teaching styles.

Selection Process Tips

The following selection process tips reflect classroom reality with an emphasis on practical concerns:

- Know the skill you wish to teach and make sure that the text you choose does in fact teach that skill.

- Does the text give simple, clear, and precise directions for each step?

- Is the reading level as low as it can be for the skill being taught? Note that in some cases the reading level just cannot be adjusted down. When it cannot, directions can be handled verbally rather than having the student read them.

- Always keep in mind that with commercially prepared material, reading levels and students' "tested abilities" do not always match.

- Can the student read and comprehend the directions as given in the text?

- Are there pictures, examples, and diagrams that help? Those who cannot read well may still be able to follow if these are supplied in the text.

- Are the books attractive and do they keep students' interest? Materials should not be overcrowded; avoid cheap paper and poor print that fades out; look for color on the pages as well as white spaces.

- Are the pages crowded or are there some "white" spaces?

- What about print size? This is important, especially for the many adults who suffer from vision difficulties. Too often, the higher the reading level, the smaller the print size.

- Are the skills taught in short sequential segments? Is there enough practice for each skill? What about quizzes? A quiz over each task is preferable to just one quiz over the whole text. Are keys available for students who wish to check their work as they progress? Immediate feedback is important. Cheating is not so frequent in classes made up of self-motivated, goal-oriented adults as in traditional classrooms of young students.

- Is the cost of an individual text or series reasonable? It is expensive

to jump from one series to another. Instructors should probably choose a good series over a single book with a high cost.

- Does the book try to cover too much information? A series of booklets is preferable for students, but cost often dictates publication of books that are over 1/2-inch thick. The density of learning (meaning the scope of work) should not be intimidating, nor should the format of the learning material.

- When samples arrive from commercial publishers (whether requested or not), share them with staff and students to determine the possible value of them to your program.

Chapter 5
Guidelines and Methods for Developing Occupationally Related Basic Skills Programs

Projects designed to develop and operate basic skills training programs in business settings have identified several factors to be considered by program developers. This chapter discusses four principles for program development as well as the Instructional Systems Development (ISD) procedures. The ISD procedures were developed by the U.S. Department of Defense as guidelines for developing basic skills or other technical training in work settings.

Principles for Program Development

Conceptual models of the adult learner in occupationally related basic skills programs suggest the importance of four principles for program development. These principles are as follows:

- Maintain an orientation to the mission of the organization for which basic skills programs are being developed.
- Provide training in basic skills within a functional context.
- Arrange program conditions to maximize active learning time.
- Use a competency-based mastery learning instructional approach where possible.

Basic Skills as Corporate Mission

Educators in business, industry, and government organizations often conduct basic skills programs for adults in business settings. These educators ordinarily regard the individual and his or her needs as the major focus of concern. However, within the context of a particular work setting, the mission and goals of the organization becomes the primary concern. Educators then must determine how to develop an effective basic skills program that will help the business or agency achieve its goals in a cost-beneficial manner. A company is more likely to offer basic skills training if basic skills and technical skills training can be integrated and taught at a fraction of the cost of two separate programs.

Basic Skills in a Functional Context

Skills and knowledge are best learned if they are presented in a context that is meaningful to the student. Students who need job-oriented basic skills should not be taught to read, write, and compute with general literacy materials. Educators should use job-specific materials and tasks. For students planning to work in a particular industry or organization, the use of job-specific materials serves two purposes. On the one hand it provides a functional context for the learner--he or

she can see that the materials are relevant to the employment goal--thereby raising motivation to use the materials. On the other hand, the organization can see that the training is relevant to its needs and that there is some likelihood of the trainees actually becoming competent in the performance of job-specific skills. Thus organizational motivation to participate in the training is gained.

Maximizing Learning Time

Learning occurs best when the learner is actively engaged in information processing, that is, seeking, transforming, and representing information. Program developers and operators should arrange the instruction so that the greatest amount of time possible is spent with each trainee actively engaged in a learning task. Learning time is a precious commodity for both organizations and adults. Adults have responsibilities that place demands on their time, such as shopping, working, and other duties associated with their multiple life roles. The time adults spend for goal-oriented learning should be well managed to ensure that time spent on learning tasks is kept at the highest level possible. Because many organizations count training time against productivity, any activities that reduce training time contribute to productivity (other things being equal). Thus, if trainees are kept actively learning and this results in more efficient training, then organizational functioning in the training area and the performance of the organization is improved. Through these means, increasing time on task contributes to both the learner's and the organization's goals.

Competency-Based Mastery Learning

This principle actually contains two main ideas. The first, *competency based*, refers to the idea that the skills and knowledges to be taught in the basic skills program should be relevant to the learner's occupational setting. In competency-based learning, a person's learning goals should be stated in terms of acquiring the competencies needed to perform the tasks of the job, rather than in terms of some external referent such as a grade school level or percentile score. In the case of a wastewater treatment workers project, vocabulary learning should not be defined in terms of fifth- or sixth-grade levels, rather, it should be defined in terms of technical terms the workers need to know and to be able to read and use on the job.

The second main idea, *mastery learning*, has to do with setting standards of competency. In job-oriented basic skills programs, where competencies can be defined beyond what would be appropriate to general education, it may be possible to set standards at the mastery level. At the mastery level, 100 percent of the trainees learn to perform 100 percent of the basic skills tasks in order to indicate competency in the job literacy domain. Although the concept of mastery is useful as a goal for program operations, not all trainees can be expected to learn all tasks to the mastery standard due to various factors such as limited time. In such cases, it is important to know whether mastery is not achieved because of a lack of relevant knowledge about how to accomplish the task, the requisite knowledge needed to do the task, or slowness of skill in accomplishing the task. In the latter case the mastery standard should be relaxed to permit the trainee to learn other critical basic skills needed for the job.

Instructional Systems Development (ISD)

In developing job-related basic skills programs, program developers should use a systematic procedure that ensures that the basic skill tasks to be taught are actually representative of the job. One such set of systematic procedures is the Instructional Systems Development (ISD) process identifed in military research and development. Here, an overview of ISD's five major procedures is provided, along with some comments regarding the application of the procedures to job-related basic skills programs. It should be understood that the procedures are interactive.

Analysis

The analysis procedure of the ISD system is concerned with (1) determining that a training need exists, and (2) identifying what the content of such training should be. An analysis should establish that an organization needs to conduct basic skills training. The training may be needed because of an inability to find sufficient numbers of qualified job applicants or because new technology has changed the requirements for basic skills, and so forth. The analysis should establish whether the organizational problem is due to some basic skills requirements that are not being met, rather than logistical problems in obtaining supplies and materials, inadequate assignment procedures, poor management, and the like.

During the analysis process, the basic skills requirements of the organization's job training system and job duties should be established. In determining basic skills requirements of work, two aspects of requirements may become of concern. Managers and others who screen and classify jobs would want to know the general level of reading or mathematics required for successful performance in training or on the job. They might find useful some sort of summary index number, such as a reading grade level, that characterizes the basic skills requirements of jobs. Trainers, on the other hand, are more concerned with knowing the basic skills tasks that must be performed so that curricula for basic skills training can be developed.

Design

When the need for basic skills training and the basic skills tasks to be learned are understood, the design of an instructional program should begin. The instructional program should simulate the job requirements to the greatest extent possible. This ensures the most rapid learning of the job-related basic skills and their transfer to the job setting.

Where students have a very low literacy level, learning activities should build on the students' experience. The learning materials should be accompanied by oral learning of vocabulary, concepts, job principles, and rules. All reading assignments should build on this prior experiential and oral language base of knowledge. Extended practice should be designed into all activities so that adequate levels of performance can be attained.

Development

The development process includes specifying the actual learning activities and organizing the activities (including tests) into an overall systematic program of basic skills training. For lower skill levels, program developers may need to develop simplified versions of real job materials, such as simplified prose passages from technical manuals, partial forms (as some industrial forms are very long and complex), and procedural directions with only a few steps per page to be read and performed. Eventually, however, the materials should become as difficult as those to be used on the job.

Tests should measure the actual job performance requirements of reading, oral language, or mathematics tasks, and should parallel what is taught. That is, tests

should determine whether what is being taught is being learned and, if so, is it actually needed to perform job-related tasks. To the extent possible, the principles of time on task and competency-based mastery learning should guide the development activity.

Implementation

During the implementation phase, the curriculum materials should be tested and revised where necessary. The entire curriculum and training management system should be allowed to operate for some time before determining how well materials and procedures are working out.

In addition to testing and revising materials, the implementation activity may extend to the actual operation of the new program. If it does, attention should be given to establishing the social networks within and outside the organization that will have to support the program. Within the organization, all parties involved from highest-level management to the potential students must be informed of the program and its purposes. Any effects of the program on various organizational departments, such as the personnel department, should be made explicit. Outside the organization, agencies such as schools, government offices, and community-based organizations that may support the program through referrals, follow-up, and so forth should be contacted and briefed on the program and its purposes. These activities may reveal important factors that need to be incorporated into the design of the program; therefore, implementation activities should not be postponed until a program is completely developed. Planning for implementation should occur at the beginning of the project.

Social networks also should be considered. Employees constantly draw upon each other's knowledge and expertise to solve problems. Research has shown that workers on the job ask questions of each other nearly twice as often as do students in school (Mikulecky 1982). Trainees sometimes work cooperatively in both study and job performance and develop social networks as a result. These social networks, which provide intellectual and emotional support, can be built into the job simulations and training programs.

It is essential that the individual workers be informed about programs and that social networks for encouraging individual participation be established. Many adults may be reluctant to enter into a basic skills program, so it would be better to refer to the program as a job skills training program and to build the social support networks that will aid in the recruitment and support of trainees.

Evaluation

If there is one point at which most program developers fall short, it is in determining the value of the program. Very few basic skills or technical skills training programs gather adequate quantitative and qualitative information to determine whether or not the program is cost-efficient; that is, whether the benefits of the program outweigh the costs of developing and conducting the program. Although this is admittedly difficult to do, program developers should attempt to do the best evaluation they can. At a minimum, a program that purports to develop certain cognitive skills in trainees should demonstrate the extent to which such skills are acquired. For instance, if the program purports to improve job literacy or numeracy skills, then the evaluation method should include procedures for indicating that trainees can perform reading and mathematics tasks at the end of training that they could not perform at the beginning of training. Such demonstrations should be possible if the principle of competency-based mastery learning is followed.

More about Curriculum Development

This literacy enhancement program planning guide does not duplicate the generic curriculum development materials that are to be found in one of the companion pieces of this monograph, *Developing Curriculum in Response to Change*. Part II of that publication, "Stages of Curriculum Development," contains a thorough analysis of the process of generic curriculum development. The topics covered therein include--

- assessing needs,
- defining objectives,
- identifying resources,
- developing curriculum content,
- implementing a curriculum, and
- monitoring and evaluating implementation.

It is suggested that the program developer review part II of *Developing Curriculum in Response to Change* for important supplementary information to the materials contained in this publication.

Part II
Literacy Enhancement Programs for Adult Nonnative Speakers of English

Chapter 6
Learning English

According to a study conducted by the National Commission for Employment Policy (1982), one of the greatest obstacles to success for Hispanic workers in the United States is the lack of English skills. It is reasonable to assume that language problems are also the greatest obstacle to success for all non-English speaking immigrants.

Before job training begins, non-English speakers usually need English to find housing, make purchases, secure medical help, obtain social service assistance, enroll their children in school, use transportation, and carry out other necessary tasks. During vocational instruction, English is needed to understand tests, forms, teachers, safety signs, textbooks, manuals, films, charts, instruction sheets, as well as to converse with classmates. After vocational instruction, English is needed to understand job developers; read classified advertisements; network effectively; phone, write, or visit potential employers; and participate successfully in employment interviews.

After a person finds employment, adequate English skills are needed to retain that position and to be promoted. It is often said that 80 to 90 percent of workers who lose their jobs lose them because of interpersonal problems, not because of difficulties related to their technical skills. Thus, the ability to communicate well on the job is essential for success, and that communication usually must be in English. Thus, immigrant workers need English to communicate with supervisors, colleagues, job trainers, subordinates, customers, clients, patients, vendors, and repair persons.

The need for English cannot be overemphasized if immigrants are to enjoy full participation in life in the United States, especially in their work environment.

Teaching English to Immigrants

Teaching English as a second language (ESL) in the United States was not actually in full force until the mid- to late-1960s. Before that, adult immigrants who were lucky enough to receive any formal English instruction probably were subjected to classes taught by regular English, history, or foreign language teachers who focused on proper English grammar and usage and who employed methods that could hardly be considered interesting or meaningful.

As the field developed, more sophisticated and appropriate techniques were introduced. The field of ESL began to look less toward the field of English for assistance and more toward the fields of linguistics and foreign language teaching. This was a change for the better, especially since learning English as a second language is much different from polishing one's English proficiency as a first language; it is similar to learning other

foreign languages. Thus, the ESL programs of the 1960s copies many of the techniques used in foreign language programs.

Probably the most widely used foreign language teaching method then was the audio-lingual method. The goal of this method was to teach students all aspects of English grammar, vocabulary, and pronunciation and to use it in structured activities, such as word or phrase repetition, substitution drills, and dialogue memorization. Avoiding errors and instilling correct English "habits" were among the major objectives of this method. Critics began to complain, however, that students were "half-asleep" while repeating the dialogues. Also, the dialogues that the students were forced to memorize depicted unrealistic, if not absurd, situations. As a result, few adult immigrants completed their ESL programs as these classes contributed little to their daily needs.

Since that time, several more cognitive as well as humanistic approaches to the teaching of ESL have been introduced successfully, and students generally have more opportunities for free expression and more meaningful instruction. In addition, ESL educators have recently departed from covering all aspects of English grammar, vocabulary, and pronunciation as they have realized the importance of tailoring their ESL classes to students' particular needs. As a result, phrases such as "General ESL" versus "English for Special Purposes," "Prevocational ESL," and "Vocational ESL" have begun to surface.

General ESL

Most general ESL classes attempt to teach all aspects of English grammar, vocabulary, and pronunciation. The curriculum is usually structural (based on the simplest to the most complex grammar), which means that in the table of contents of a general ESL text, the chapters might include the following:

- "The Verb To Be"
- "The Simple Present Tense"
- "The Present Progressive"
- "Adjectives and Nouns"
- "The Simple Past Tense"

General ESL classes have long been considered the only way to teach English to immigrants because they attempt to cover the entire English language gradually by progressing from the simplest grammatical structures and vocabulary to the most complex. However, experience has shown that general ESL classes have not met the needs of most immigrants because they need English classes that can immediately help them survive in U.S. communities and employment situations. A grammar-based approach simply cannot do this.

English for Special Purposes (ESP)

ESP classes were designed to provide foreign students with English skills needed to function in specific situations. Such programs in the United States have only served students with strong academic skills who are preparing for professional careers in U.S. universities. Unlike general ESL instruction, the curriculum is situational, based on topics related to such fields as engineering, medicine, and business. The table of contents of an ESP text related to civil engineering might include these chapters:

- "Surveying"
- "Modern Buildings and Structural Materials"
- "Bridges"
- "Tunnels"
- "Environmental Engineering"

Such a text would be concerned with teaching only the vocabulary and grammar related

to these topics, and not to the technical skills involved with civil engineering. And unlike most general ESL classes, the grammar is presented in the order it is needed, not from simplest to the most complex.

Prevocational ESL

Prevocational ESL classes are designed to provide students with the English needed to survive in a U.S. community. As in ESP, the curriculum is not based on grammar, but on situations, in this case related to survival skills, career awareness, and employability skills. The table of contents of a prevocational ESL text might contain the following chapters:

- "Finding an Apartment"
- "Reading Want Ads"
- "Health-Related Careers"
- "Using Public Transportation"
- "Writing a Check"

Prevocational ESL is probably the most commonly used approach to teaching English to immigrants who are preparing for the U.S. job market. Unfortunately, the effectiveness of this approach is limited because it uses situations that are appropriate to everyone or every job. As a result, immigrants may learn survival English for their daily consumer needs and learn something about finding employment, but they learn little English that will help them with specific job training. Some prevocational ESL instruction should be included in a curriculum for adult immigrants, but prevocational ESL instruction alone is insufficient for individuals preparing for the U.S. job market.

Vocational ESL

Vocational ESL instruction is designed to provide learners with the English skills necessary to survive in a job training program (either formal vocational education or on-the-job training) and on the job. Its curriculum is situational, that is, it's based on topics related to specific trades such as cosmetology, auto mechanics, cooking, nursing assistant, and carpentry. Few vocational ESL texts exist; however most vocational ESL instructors find that the best instructional materials are adaptations from actual vocational materials. Thus, the curriculum for a vocational ESL class is based on the topics from the job training situation.

Under all other kinds of ESL teaching, vocational ESL is closely coordinated with other instruction (i.e., the job skills training) and vocational ESL teachers understand that vocational ESL is intended to support vocational instruction, not to stand alone. Vocational ESL teachers also understand that it is their job to teach the *language* related to the vocational topics and not the technical skills.

Program Delivery Models

Vocational ESL instruction has been shown to be the most effective approach to teaching English to adult immigrants. In fact, given the ideal combination of instructional services, adult immigrants can now complete vocational training in the same amount of time and with the same degree of success as their English-speaking peers (Galvan 1981; Gunderson 1983). Since students are receiving English language instruction that is relevant to their immediate needs, they are more motivated, drop out less, and do not waste time learning English that cannot help them with their immediate employment goals (Galvan 1981). This section describes the components of an ideal English language program for immigrant workers, including delivery models and lesson development.

Perhaps unlike other kinds of ESL classes, the success of vocational ESL instruction can only be measured in terms of the students' success in the vocational class or on the job. Thus, vocational ESL serves one purpose: teach English that supports and strengthens vocational instruction or job training.

Because of the unique interdependence of job skills training and ESL and because of the unique needs of immigrant adults, in order to be successful the ideal delivery model should contain the following ingredients:

1. Vocational ESL instruction must be job specific and not merely prevocational.

2. Vocational ESL instruction should occur simultaneously with vocational instruction or job training and should be closely coordinated with vocational instruction.

3. Vocational instruction or job training should use students' native language when necessary.

Thus, programs that require adult immigrants first to learn general ESL, or prevocational ESL, before beginning job skills training are rarely successful. General and prevocational ESL cannot provide the relevant content or motivation to learn that vocational ESL classes can. In addition, few unemployed or underemployed immigrants can afford to wait to begin job skills training. Finally, limited English-proficient (LEP) immigrants may fall behind in the vocational class if supplementary instruction is not provided in their native language. Exhibit 3 illustrates the advantages and disadvantages of several kinds of instructional delivery models for adult immigrants.

Although close coordination between the vocational ESL and vocational instruction is emphasized in this chapter, one should not overlook the important roles played by counselors, job developers, and administrators. In an ideal situation, the counselor would assess the student's English language proficiency and vocational interests and aptitudes. The job developer should be sensitive to the special employability needs of those who are culturally and linguistically different. Administrators should provide the support needed to offer limited English-proficient (LEP) students the best possible services to accommodate their special needs.

Vocational English-as-a-Second Language Lesson Development

The discussion that follows describes the role of collaboration in vocational ESL lesson development, the parts of a vocational ESL lesson, and some instructional techniques used in vocational ESL.

The Role of Collaboration

Close collaboration between the vocational instructor (or job trainer) and the vocational ESL instructor is essential for successful vocational ESL instruction. The vocational ESL instructor must depend on the vocational instructor for materials, topics, what vocabulary to emphasize, explanations about the trade that will clarify the language adequately, and ideas for teaching techniques. The vocational instructor must depend on the vocational ESL instructor for information about the nature of the students' language problems, how the vocational ESL instruction actually supports the vocational instruction, cultural information about the students, and ideas for teaching techniques.

The following 10-step checklist can be used to help vocational and vocational ESL instructors collaborate effectively in the development of their respective lessons.

EXHIBIT 3

CHARACTERISTICS OF SELECTED DELIVERY MODELS

Models	Model Characteristics		
	Provides job skill and English language training concurrently so that students don't have to wait for	Provides English language training that is job-related vocational ESL so that English instruction is meaningful to	Provides job skills training in the native language (as needed) so job training is meaningful to
General or prevocational ESL followed by regular vocational education	NO	NO	NO
General or prevocational ESL along with regular vocational education	YES	NO	NO
Jobsite vocational ESL (or English at the workplace) along with on-the-job training	YES	YES	NO
Jobsite vocational ESL (or English at the workplace) along with on-the-job training, with interpreters	YES	YES	YES
General or prevocational ESL along with bilingual vocational education	YES	NO	YES
Vocational ESL along with bilingual vocational education	YES	YES	YES
Jobsite vocational ESL along with bilingual on-the-job training	YES	YES	YES

SOURCE: Friedenberg et al. (1985).

1. Identify five to eight steps from the vocational task that is presently being covered in the vocational class. Person responsible: the vocational instructor

2. Identify at least one safety precaution associated with the task. Person responsible: the vocational instructor

3. Identify at least five vocabulary words or expressions to be reinforced. Person responsible: the vocational ESL instructor (who confirms the choice with the vocational instructor)

4. Identify at least two frequently used grammatical structures from the list of task steps. Person responsible: the vocational ESL instructor

5. List at least two kinds of materials that will be used to teach the task. Person responsible: the vocational instructor

6. List at least three teaching techniques that will be used to teach the task. Person responsible: the vocational instructor

7. List at least two kinds of materials that will be used to teach the language related to the task. Person responsible: the vocational ESL instructor who confirms list with vocational instructor

8. List at least two teaching techniques that will be used to teach the language related to the task. Person responsible: the vocational ESL instructor

9. Determine the evaluation method for ensuring that students have learned the vocational language. Person responsible: the vocational ESL instructor

10. Determine the evaluation method for ensuring that students have mastered the task. Person responsible: the vocational instructor

The Parts of a Vocational ESL Lesson

After the vocational ESL and vocational instructors have met, the vocational ESL instructor should take the information obtained from the vocational instructor and create a more specific lesson plan for his or her own use. This more detailed plan (Friedenberg and Bradley 1984) includes the following kinds of information:

- **The vocational topic.** This component may be a duty, task, task step, or objective and should be determined by the vocational instructor.

  Examples:
  Cosmetology--Wet the hair
  Carpentry--Identify basic tools

- **Vocabulary and idiomatic expressions.** Technical and nontechnical terminology should be listed, confirmed, and clarified with the vocational instructor. (No pairing between the nontechnical and technical items is intended.)

  Examples:

Nontechnical	*Technical*
return	anchor
check	connector
attach	outlet
black	duplex receptacle
white	conduit

- **Grammatical structures relevant to the vocational topic.** Unlike general ESL, the grammatical structures to be covered will be determined only by their relevance to the vocational topic. The commonly identified grammatical structures in vocational ESL instruction are the imperative (command), passives, prepositional

phrases, noun compounds, adjective-noun combinations, simple present third person singular, and noun plurals (Melton Peninsula 1981).

Examples:
Command--
Determine the location
Mount the boxes
Install the conduits
Simple present, third person singular--
The strainer *catches*. . .
The capillary tube *reduces*. . .
The condenser *cools*. . .

- **Language skills to be emphasized.** The vocational ESL instructor must identify language skills such as listening, speaking, reading, and writing that need to be reinforced for the given vocational topic. Unlike general ESL, vocational ESL teaches students only that which is absolutely necessary. For example, if literacy is not needed reading is not taught. (This does not imply that reading is unimportant; it is simply ignored for the moment.) The vocational ESL teacher must find out from the vocational teacher specifically what the student will have to understand, say, read, and write in order to function successfully in the vocational classroom and on the job.

  Example:
  A housekeeper in a hotel would only need to learn how to read and fill out a typical maid's checklist.

- **Cultural information.** Almost any aspect of job training includes behaviors that could easily differ across cultures. Vocational instructors and employers relate countless stories of potentially competent workers who have problems in the vocational classroom, getting a job, and keeping a job because of cultural differences. Often the vocational ESL instructor is the only one who can help immigrants with culture-related issues and for that reason it should be part of all vocational ESL lessons.

  Example:
  The correct nonverbal behavior of a cosmetologist when greeting a patron, for example, would involve appropriate distance and eye contact.

Instructional Techniques

The instructional techniques used in vocational ESL vary as much as the occupational areas served. They usually include a balance of structured activities and communicative activities with only a touch of modern technology.

Structured language activities focus on specific grammar or vocabulary drills and usually contain only one correct answer for each item. Examples include matching, questioning, nonverbal responses to commands, sentence conversions, meaningful dialogue memorization, crossword puzzles, and identification of parts and processes.

Communicative activities focus on a particular situation, and students can say or do anything that is appropriate for the given situation. Examples include role-playing, discussion, listening comprehension questions, cloze[1] exercises, and filling out actual job-related forms such as purchase orders and worksheets.

Many innovative vocational ESL programs use computers and audiovisual aids. In Illinois, a pilot computer-assisted vocational ESL program for the field of electronics was developed by the Northwest Educational Cooperative. In southern Florida, computers are being used to keep records of the progress of all immigrant vocational students for the purpose of

[1]Cloze refers to a test of reading comprehension that involves having the student supply words that have been systematically deleted from the text.

generating meaningful statistics to include in funding proposals. In addition, many vocational ESL classes are making use of Language Masters[2] to help individualize instruction and to reinforce the names of tools and equipment. Broward County Schools (Florida) uses the Language Master with locally developed cards to teach vocational ESL. In addition vocational ESL instructors often use actual objects from the vocational laboratory to help illustrate concepts.

Recent Trends and Innovations

The special language needs of adult immigrants are becoming recognized by a variety of educators. Each individual, group, and institution has contributed in its own creative way. Some programs have used technology in the classroom while other have provided simple, helpful English instruction at the worksite.

For example, in a project coordinated by MacDonald et al. (1982), a computer program entitled TXTPRO was developed that analyzes vocational education texts for the most frequently used terms. Available as microcomputer software, TXTPRO can provide vocational ESL teachers with a basis for selecting the most important vocational terms to cover.

Nationally, the Mainstream English Language Training (MELT) programs have developed and field-tested competency-based prevocational and vocational ESL curricula for refugees to support on-the-job training in several cities. They have also developed a technique of analyzing occupations for common functional language, such as asking for directions, describing a process, and responding to complaints. This way individuals preparing for a variety of trades can learn English together.

Another national program, the Vocational English Language Training (VELT) Resource Project, has developed a resource packet that can be used in vocational ESL instructional settings. The packet contains the following components: descriptions of existing VELT programs, characteristics or factors associated with successful vocational ESL programs, guidelines for developing VELT programs, names of resource persons, lists of VELT programs whose staff can be contacted for program development information, and a bibliography of noncommercial VELT materials.

Vocational ESL instruction is only one of the important components in the process of helping immigrants and others adjust to working in the United States. Since learning English is probably the greatest obstacle to their success, English language classes should be relevant and immediately useful. With the help of caring vocational ESL instructors and vocational personnel, the adjustment to the world of work can be a smoother and more successful one for the students and their employers.

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[2]A Language Master is a modified tape recorder manufactured by Bell & Howell. Instead of using a continuous tape, the machine "reads" pieces of tape that have been affixed to cards and inserted into the machine. The tape describes the visual image depicted on the card, such as an object or a sentence.

Chapter 7
Bilingual Education: The State of the Art

This chapter presents an overview of the latest and most successful strategies in bilingual vocational education with regard to program designs, assessment practices, instructional materials, and personnel practices. Included is a description of successful strategies in bilingual vocational instructor training (BVIT).

Program Designs in Bilingual Vocational Training

Experience has shown that although, in practice, a variety of workable bilingual vocational training program designs are employed, the following three characteristics will help ensure success:

- **Bilingual job skills instruction**--Vocational instruction that utilizes English and the students' native language(s)
- **Simultaneous ESL instruction**--ESL instruction that is available to the student while the student is receiving vocational instruction (as opposed to ESL instruction that is only available before the student begins vocational training)
- **Job-related ESL instruction**--ESL instruction that focuses on the vocabulary and grammar used in the vocational classroom and, ultimately, on the job (Galvan 1981)

The Bilingual Vocational Training Model

The bilingual vocational training model refers to a program with some form of the three essential characteristics mentioned above. Although there is little room for flexibility with the latter two characteristics (i.e., simultaneous ESL instruction and job-related ESL instruction) there are a variety of ways to provide bilingual job skills instruction whether or not the vocational instructor is bilingual.

Concurrent Language Approach

The concurrent language approach requires the vocational instructor to use two or more languages, switching from one to another. Ideally, the vocational instructor switches languages to clarify instruction. If the vocational instructor knows little of the limited-English proficient (LEP) students' native language(s), she or he can still learn to provide positive reinforcement in the other language(s). Although limited, this use of the students' native languages is worthwhile and can be supplemented by bilingual teacher aides or peer tutors.

Bilingual Aide Approach

In the bilingual aide approach, an English-speaking vocational instructor is assisted by a paraprofessional or community member who helps to assess the LEP students' native language, translate instructional materials, tutor LEP students individually, and evaluate student progress. The assistant can be a paid or volunteer staff member.

Peer Tutor Approach

The peer tutor approach is similar to the bilingual aid approach, but the assistant is another student whose role is limited to clarifying instruction. It should be emphasized that peer tutors do not evaluate other students.

Resource Center Approach

The resource center approach involves having LEP students leave the vocational classroom and receive tutoring in their native languages in a resource center. Resource centers are typically used when there are too few LEP students in each class to warrant in-class bilingual instruction or when there are too many different language backgrounds in each class to make bilingual instruction practical. In the latter case, all of the native language tutors are available at one common resource center.

Bilingual Instructional Materials Approach

The bilingual instructional materials approach is used when there are no bilingual personnel available in the vocational education center. In this case, a consultant, a volunteer from the community, an aide, a colleague, or an experienced student provides written or taped translations of the instructional materials so that LEP students can work independently. It should be kept in mind that both commercially produced and imported bilingual instructional materials are available.

Alternative Models

Although the bilingual vocational training model has been found to be the most effective one for LEP students, this model often is not implemented due to financial, political, legal, personnel, or facility limitations. In this case, other designs, such as those described below, are used.

Monolingual (English) Vocational Education

Monolingual instruction is used in most vocational programs. Since the language of instruction in this country is English, these programs provide no special services to LEP students. This approach is often referred to as the "sink or swim" approach.

Vocational or Prevocational ESL

In addition to the vocabulary and grammar associated with specific occupations, vocational or prevocational ESL classes focus on basic survival and employability skills. Although these classes are worthwhile, they do not provide the actual occupational skills training needed to acquire gainful employment. In some cases refugees have been able to acquire unskilled jobs (e.g., car washers, maids, porters, dishwashers) after attending a prevocational or vocational ESL program.

ESL along with Regular Vocational Education

The provision of ESL instruction in the regular vocational education classroom is probably the most effective of the three alternative models. It involves a combination of English-as-a-second-language instruction and regular vocational instruction. The major drawback of this program is that severely limited English-speakers will often not advance quickly enough in ESL to be able to comprehend adequately the instruction in the vocational class.

The alternative would be to require LEP students to study ESL before beginning vocational training. Although this practice is carried out in many places, including most refugee assistance programs, it is frustrating for students who desperately seek an occupation to have to wait many months while mastering survival English before being permitted to begin vocational training. Experience has shown that ESL is learned more efficiently when it is job related and provided along with vocational instruction (Galvan 1981). In addition, the practice of requiring competence in English before a student can enter a vocational education program is legally questionable.

ESL and On-the-Job Training

Providing ESL instruction along with on-the-job training is becoming increasingly popular as immediate needs for work increase and funds for vocational education programs decrease. This strategy is most effective when the ESL instruction is job related (i.e., vocational ESL), when the ESL instruction takes place on the job site, when the on-the-job training is bilingual, and when a significant number of demonstrations are presented.

Additional Strategies for Successful Programs

In addition to the use of an appropriate program design, other strategies can contribute to the success of bilingual vocational education programs. Troike, Golub, and Lugo (1981) identify several program features that contribute to success in bilingual vocational education. These strategies include the following:

- Careful, in-depth planning
- Careful assessment of the job market needs in the community and the language needs of the prospective trainees
- A full-time bilingual staff committed to the success of the trainees
- Inservice training for staff
- Personal and professional counseling services for trainees
- Cross-cultural training in American culture, especially in employment practices for trainees
- Bilingual vocational instruction closely coordinated with the ESL instruction
- Job-related ESL instruction that is closely coordinated with vocational instruction
- An advisory committee representing the minority community, vocational skills areas, as well as other areas of the employment sector
- Follow-up services for trainees who have completed the program and joined the work force

Assessment Practices in Bilingual Vocational Education

Assessment of LEP vocational students involves some atypical considerations. Unlike regular vocational education programs in which students can be given vocational interest, aptitude, and skills tests exclusively in English, bilingual vocational education program students are often tested in English and in their native language. In addition, language testing is also an integral part of the assessment program.

Assessment for LEP vocational students should take place in the following areas and should involve a close collaboration among counselors, vocational instructors, and ESL instructors:

- Vocational interest and aptitude
- Proficiency in English
- Proficiency in the native language
- Proficiency in the vocational skill area
- Achievement in the vocational skill area
- Achievement in English (during the program)
- Achievement in English (after the program)

Vocational Interest and Aptitude

Vocational interest and aptitude tests generally are administered by a vocational counselor before vocational instruction begins. These tests should be available to LEP students in their native language. In many cases, it is sufficient to have existing instruments translated by competent bilingual staff or community members. In some cases, it is necessary to provide a cultural orientation to employment opportunities in the United States. LEP vocational students who have recently arrived in the United States are often unaware of the types of jobs that exist in this country.

Proficiency in English

English language proficiency should be assessed as soon as an LEP student enrolls in the vocational education program. Ideally, an ESL proficiency test should be administered, scored, and interpreted by a trained ESL teacher. However, vocational counselors and instructors do an adequate job of testing English language proficiency when necessary.

An assessment of English language proficiency serves to provide a measure of the following important functions:

- If the assessment of vocational skills must be in the native language or if it can be in English
- How much vocational instruction in the native language is needed
- Placement level in the vocational ESL class
- Increases in English proficiency (achievement) over the course of the vocational ESL training period

Friedenberg and Bradley (1983) suggest five important characteristics that an oral English proficiency test for LEP vocational students should possess. These characteristics are as follows:

- The test should not require any reading.
- The content of the test should be appropriate for adults.
- The test should elicit the student's ability to comprehend and communicate a message as opposed to assessing formal grammatical correctness.
- The test's content and form should not be geared to ESL students with strong academic backgrounds.
- The test should reflect the kinds of grammatical structures used most frequently in vocational education classes.

In some cases, it is desirable to have a measure of how much English a student can read and write. Although reading and writing are generally not stressed in vocational ESL classes, many occupations require enough reading and writing ability in English to warrant an assessment. There are some instruments available for assessing reading and writing ability in English; however, these instruments are often inappropriate for LEP vocational students. In this case, dictation and cloze procedures are recommended.

Proficiency in the Native Language

Assessing proficiency in the native language can be carried out by a bilingual counselor, vocational instructor, aide, or ESL teacher and should be done as soon as the student enrolls in the vocational education program. The main purpose of this type of assessment is to determine whether or not bilingual instruction will be effective for the LEP student.

For example, many LEP students cannot read or write in their native language. For these students, then, translating vocational materials into their native language would not be helpful. Similarly, LEP vocational students often have little or no knowledge of the technical vocabulary in their native language. Again, for these students, supplying translations of vocational terms in their native language would not be an effective strategy. Few, if any, appropriate assessment instruments exist for this kind of testing. Techniques such as oral interview, dictation, and cloze in the native language are adequate substitutes for assessment in most cases.

Proficiency in the Vocational Skill Area

An assessment of vocational skill level should take place before vocational instruction begins. The most appropriate person to provide this testing would be the vocational instructor; however, in many cases this testing must take place in the student's native language, requiring the nonbilingual vocational instructor to seek translation assistance from a bilingual aide or other staff member. It is very important to make the vocational skills assessment available in the student's native language; failure to do so may lead to the erroneous conclusion that the student knows nothing about a skill area when the actual problem could be the student's inability to demonstrate that knowledge in English.

In most cases, it is relatively simple to assess vocational skills in a student's native language because the student needs only to have oral instructions translated in order to demonstrate his or her ability to carry out the instructions. This is, of course, more complicated with occupations that require the student to engage in reading, writing, and explaining.

Achievement in the Vocational Skill Area

Helping the student achieve progress in the vocational skill area is the responsibility of the vocational teacher. Tests of student progress involve periodic checks or quizzes that indicate to the teacher whether or not the student is successfully keeping up with the instruction. In some cases, testing should continue to be given in the student's native language; however, the vocational instructor must encourage LEP students to function independently in English, especially with regard to those skills that require the student to use English on the job.

Achievement in English during the ESL Course

Like the vocational teacher, the ESL instructor must periodically check the progress of students during the course of the program. This assessment is, of course, administered in English and is based on the content covered in the vocational ESL course.

Achievement in English after the ESL Course

Postprogram assessment is administered by the ESL instructor after a particular course of study is completed by the student. The main purpose of this testing is to determine the degree of success of the instructional program. Such tests are

usually used to evaluate the effectiveness of experimental instructional programs. In the case of specially funded programs, posttests are used to determine the degree of success of the program and to make decisions about the continuation of funding.

In a vocational ESL program, the instrument used for assessing vocational ESL achievement should be the same instrument used for the initial assessment of English language proficiency. If the measure is to be used for follow-up purposes, the testing should be formal and a standardized instrument should be used. However, if only a general picture of program effectiveness is required, informal procedures such as structured oral interviewing may be used.

Instructional Materials

Appropriate instructional materials are essential to the success of any vocational education program. The same is true for a bilingual vocational education program. Galvan (1981) notes that LEP vocational students have a right to instructional materials they can understand and from which they can benefit. These instructional materials may take such forms as textbooks, handouts, instruction sheets, and audiovisual aids.

Textbooks

Two kinds of textbooks are used for bilingual vocational training: English and non-English. In order to decide which kind(s) to use, an instructor must have the following information:

- How well can the students understand, speak, read, and write English?
- How well can the students read in their native language?
- How much technical knowledge of the field do the students have?
- How much formal education have the students been exposed to?
- What kind of influence does the students' cultures have on their attitudes and approaches to learning?

In most cases, LEP students can benefit from English vocational texts; however, instructors and aides usually find that it is necessary to modify these texts to make them more understandable. Typical kinds of modifications are translating parts of the text (e.g., key points, headings, and terms) into the students' native language, summarizing important terms, highlighting important parts by underlining them, and bringing all cultural and sex biases in the text to the students' attention.

Sometimes it is desirable to provide LEP students with vocational texts written in their native language. Some of the advantages of providing non-English materials are--

- helping LEP and bilingual students prepare for exams,
- allowing LEP students to begin vocational training immediately while they are in the process of learning English, and
- contributing to the LEP students' self-concepts by demonstrating that their native language is a valuable medium of instruction.

The following are some of the disadvantages of using non-English vocational materials:

- They may not be technologically suitable for the United States.

- They may not have an English counterpart or be cross-referenced with an American text.
- They may be difficult and expensive to order, although some United States distributors are alleviating this problem.
- LEP students may be unfamiliar with the technical language of their chosen occupation in their native language.
- LEP students may be unable to read their native language.
- LEP students may continue to rely solely on their native language, especially for the entire course of the vocational program.

Used to their advantage, non-English texts can be helpful to bilingual vocational education programs, especially when they are used to supplement the regular English text.

Instruction Sheets

Instruction sheets are written teaching aids that are designed to be used individually by students. They are especially useful in multicultural vocational education settings where the students' abilities vary regarding occupational experience and knowledge, as well as proficiency in English and reading ability. Instruction sheets are designed to provide the precise amount of information that a student needs at a particular time, and to provide that information in a manner appropriate to the reading level of the student. For the LEP student, this means that all or part of a particular instruction sheet might be written in his or her native language.

Common ways that instruction sheets may be modified for LEP students include (1) increasing the number of diagrams and sketches, (2) providing translations for the names of tools and equipment, (3) translating entire procedures, and (4) translating safety precautions. Assignment sheets have been helpful for LEP students who need assistance in deciphering and extracting the most important information from a text. Job sheets and job plan sheets help LEP students understand and experience the exact kinds of tasks that will be required of them on the job. Information sheets are sometimes used to provide supplemental information, such as reviewing key terms.

Audiovisual Aids

Audiovisual aids are extremely useful for LEP vocational students in that they help clarify instruction with minimal use of words. Illustrated safety signs remind LEP students of hazards. Wall charts, posters, and illustrations clarify the names of tools, equipment, and materials. Slide, filmstrip, and film presentations can demonstrate tasks and procedures when descriptions are hard to understand.

Audio cassettes can be used to provide oral translations of written materials if LEP students cannot read, or if the person translating the materials cannot provide written translations. Other audiovisual aids include models and samples. Such aids are particularly useful to LEP students who are new to this country or who have limited experience in the occupational area being presented.

Personnel

The following sections describe the professional roles, educational practices, and competencies of various personnel who work with LEP vocational students, including vocational instructors, instructor aides, counselors and placement specialists, administrators, and ESL teachers.

Vocational Instructors

The vocational instructor in a bilingual vocational education program is required, like all other vocational instructors, to have (1) occupational experience and skill in their vocational area and (2) the ability to teach. Vocational instructors in bilingual vocational education programs are also expected to be proficient in a language other than English and have corresponding cultural sensitivities (Hurwitz 1980).

Although proficiency in a language other than English is cited as one of the expected competencies of a bilingual vocational instructor, it is possible for monolingual (English-speaking) instructors to teach LEP students successfully. These English-speaking instructors are culturally sensitive, caring individuals who have a particular interest in teaching LEP students and who have learned some of the practices and competencies needed by bilingual vocational education instructors. The bilingual vocational education instructor should be proficient enough to read, write, and converse in the students' native language. In all cases, the successful bilingual vocational education instructor is culturally sensitive and motivated to teach LEP students.

Whether developed through participating in inservice bilingual vocational instructor training programs or through experience, successful bilingual vocational education instructors use the students' native language(s) to clarify instruction. If necessary, they ask a bilingual aide to translate major concepts and principles, into the students' native language. An aide might also be asked to summarize the lesson in the students' native language.

Successful bilingual vocational education instructors also communicate carefully in English. Their speech is clear but not inappropriately loud. They avoid colloquial expressions, and they ask questions in sentences with simple grammatical construction. Although they collaborate with the ESL instructor to support the students' progress in the use of English, these instructors do not place unnecessary importance on formal grammatical correctness in English. Their primary concerns are communicating with and providing positive reinforcement for LEP students' in their attempts to use English.

Bilingual vocational education instructors modify their teaching styles to accommodate the learning styles of their LEP students. They use audiovisual aids and peer tutors. They also use body language that conveys warmth and acceptance to the students. They have a positive attitude about LEP students. They want students to learn and they show it, as demonstrated by the following attitudinal practices:

- Academic standards are not lowered for LEP students. Requirements are the same for LEP students as for all other students. Only the method of communicating those requirements varies.
- Cultural differences are valued and stereotyping is avoided.
- An effort is made to learn at least a little of the students' native language(s).
- An effort is made to learn about the students' home cultures and educational systems.
- Conflicts between school and home cultures are resolved in a positive manner.

- More concern is demonstrated for communicating with students than about students' grammatical perfection or pronunciation. (Bradley and Friedenberg 1982)

Kirschner Associates (1981) conducted a study to identify and assess the minimum competencies that bilingual vocational education instructors need to be successful with LEP students. A summary of the findings of that study appears in exhibit 4.

Only one of the 50 states, Massachusetts, has thus far adopted special teacher certification requirements for bilingual vocational instructors. Since certification requirements vary across vocational program areas and across states, it is not possible to make a general statement about bilingual vocational certification except that each instructor must meet the requirements for a particular vocational program area in a particular state.

Instructor Aides

Bilingual instructor aides are a valuable asset to any bilingual vocational education program. They are essential in programs where the instructor is not bilingual.

Aides are used in a number of ways to strengthen bilingual vocational education programs. They translate instructional materials, tutor students, introduce and summarize the instructor's presentations in the native language, and perform other duties in accordance with local needs and regulations. It is clearly understood by all participants in successful bilingual vocational education programs that the use of bilingual aides, like the use of the students' native language, will decrease as the student progresses.

Counselors and Placement Specialists

The counselor and placement specialist roles are often combined in bilingual vocational education programs. This function is one of critical importance to the success of bilingual vocational education programs and any vocational programs serving LEP students. To be successful, counselors and placement specialists must be bilingual. They must provide information and assistance with a broad variety of personal, cultural, and work-related matters in students' native languages (Troike, Golub, and Lugo 1981).

Counselors and placement specialists serving LEP students--

- help assess students' proficiency in English and their native language;
- help determine the students' occupational interests and aptitudes (in their native language, if necessary);
- help students validate their past occupational training and experience;
- conduct special employability skills training sessions (in the native language, if necessary);
- make LEP students aware of the special language, culture, and discrimination problems they may encounter on the job;
- help vocational instructors develop relevant counseling and cultural sensitivity skills;
- recruit community members who have a special interest in employing and otherwise helping LEP students; and
- refer LEP students to appropriate community agencies for legal, personal, financial, immigration, or other kinds of assistance (Bradley and Friedenberg 1982).

EXHIBIT 4

MINIMUM COMPETENCIES NEEDED BY BILINGUAL VOCATIONAL INSTRUCTORS

Competency Category	Competency Statements
Plan for Instruction	Identify the vocational skills currently required in the specific job. Develop performance objectives. Develop a course outline. Organize the vocational laboratory to simulate the job environment. Develop lesson plans. Develop bilingual vocabulary lists of the words most frequently used in the specific job. Plan for bilingual job safety instruction. Coordinate vocational skill instruction with the ESL instructor.
Use Instructional Materials and Equipment	Assess instructional materials in terms of the vocational skills currently required in the specific job. Select printed and audiovisual instructional materials for trainees of limited English-speaking ability. Adapt materials used in the specific job for trainees of limited English-speaking ability.
Provide Instruction	Determine when instruction provided in English is understood. Use trainees' native language when instruction in English is not understood. Present an explanation. Conduct a demonstration of a job skill. Guide trainee practice. Permit trainees to learn at an individual pace.
Prepare for the Employment of Students	Assist trainees in obtaining a job. Prepare trainees for working in a specific job environment.
Measure Student Progress	Prepare instruments/procedures to evaluate performance. Determine whether the trainee has the vocational skills required for the specific job. Maintain records of trainee progress.

SOURCE: Kirschner Associates (1981).

Administrators

Bilingual vocational education programs are found in a variety of settings ranging from traditional institutions to nontraditional organizations (e.g., ethnic or refugee community centers). The responsibilities of administrators vary among these settings. Bilingual vocational education program administrators and those in institutions serving LEP students always have major responsibilities for establishing and maintaining contact and support within the language minority groups, as well as overall management and fiscal responsibility.

Although final responsibility for program success lies with the director or principal, most successful programs operate in a democratic manner; that is, staff members tend to approach decision making on a consensus basis. The role of the director is "crucial in promoting a positive and cooperative working environment within the program, while representing (and, if need be, defending) the program and program staff to others" (Troike, Golub, and Lugo 1981, p. 250).

Fully effective administrators in institutions that serve LEP vocational students read and take advantage of inservice opportunities to learn more about bilingual vocational education and the cultures and languages of their language minority students. Some administrators take special pride in being able to greet all of their LEP students in each of their native languages.

Lopez-Valadez (1979) provides an implementation checklist for administrators planning to develop and implement a bilingual vocational education program. The checklist is summarized in exhibit 5.

ESL Teachers

The ESL teacher's role is of paramount importance in the training of LEP vocational students. She or he is expected to have received formal training in the theories and methods of teaching English as a second language. Ideally, the ESL teacher should hold a master's degree in Teaching English as a Second Language.

Unlike other ESL situations, the vocational ESL instructor teaches job-related English. Thus, this professional must also have some knowledge of vocational education. Vocational ESL instructors must be able and willing to communicate and collaborate with the regular vocational education staff. They must also have expertise in adapting vocational training materials for use in vocational ESL instruction. Like all personnel involved with the education of LEP students, vocational ESL teachers must also possess cultural sensitivity and an appreciation for the special problems and needs of LEP vocational education students.

Kirschner Associates (1981) conducted a study to identify and assess the minimum competencies that vocational ESL instructors need in order to be successful with LEP vocational students. A summary of the findings of that study appears in exhibit 6.

EXHIBIT 5

SUMMARY OF BILINGUAL VOCATIONAL EDUCATION IMPLEMENTATION CHECKLIST FOR ADMINISTRATORS

Area	Yes	No
PHILOSOPHY		
Do local 1- and 5-year plans for occupational education include goals related to LEPs?	____	____
INSTRUCTIONAL SERVICES		
Has existing curriculum been adapted, or new curriculum developed, to provide for the special needs of LEPs?	____	____
Has staff been hired, reassigned, or teamed to accommodate for staffing needs for LEPs?	____	____
Do inservice plans provide for staff training in areas related to serving LEPs?	____	____
Have instructional materials been acquired, adapted, or developed for LEPs?	____	____
Does the testing program include special language and cultural considerations?	____	____
Does course scheduling take the special needs of LEPs into consideration?	____	____
SUPPORT SERVICES		
Have guidance and counseling services been modified to meet the needs of LEPs?	____	____
Will other special services be provided (e.g., transportation, child care)?	____	____
Are courses offered in convenient sites?	____	____
Is all needed equipment available?	____	____
RECRUITMENT		
Have special steps been taken to recruit LEPs?	____	____

SOURCE: Adapted from Lopez-Valadez (1979).

EXHIBIT 6

MINIMUM COMPETENCIES REQUIRED OF JOB-RELATED ESL INSTRUCTORS

Competency Category	Competency Statements
Plan for Instruction	Develop lists of types of sentences most frequently used in the specific job. Develop vocabulary lists of the words most frequently used in the specific job. Coordinate English-language instruction with the vocational instructor. Develop learning activities that simulate the English-language requirements of the specific job. Develop activities to teach survival skills.
Use Instructional Materials and Equipment	Adapt materials used in the specific job for use by trainees of limited English-speaking ability.
Provide Instruction	Correct a trainee's English only if an error changes the intended meaning of the statement. Present the types of sentences in the context of usage on the specific job. Present vocabulary in the context of usage on the specific job.
Measure Student Progress	Prepare instruments/procedures to evaluate performance. Determine whether the trainee has the English-language proficiency necessary for the specific job.

SOURCE: Kirschner Associates (1981).

Successful Strategies in Bilingual Vocational Instructor Training

Only a minimum of information about successful strategies in bilingual vocational instructor training has, as yet, found its way into the professional literature. The best and most current source for such information is the collective experience of the leadership of the various bilingual vocational instructor training programs throughout the country.

There appears to be general agreement that certain prerequisite competencies exist related to occupational proficiency, language proficiency, and cultural sensitivity that instructor trainees must possess prior to acceptance into a bilingual vocational instructor training program. Although experiences in the training program will strengthen these competencies, individuals cannot expect to acquire all of them in the typical short-term program.

The list of prerequisite competencies shown in exhibit 7 was published by Kirschner Associates. Although the description of specific competencies would vary across programs, successful bilingual vocational instructor training programs do have prerequisite competencies as part of their selection criteria. The following is a list of characteristics of successful bilingual vocational instructor training programs:

- Trainers should possess prerequisite competencies in occupational proficiency, language proficiency, and cultural sensitivity.
- Trainers should have expertise in vocational education, bilingual education, and ESL.
- Trainers and support staff should be culturally sensitive to the trainees.
- Trainers should communicate with trainees in their native language(s).
- Trainers should provide professional, certification, and personal counseling.
- Program staff should identify the actual needs of the community in terms of employing vocational education instructors.
- The program should have the commitment and support of an active advisory committee that is comprised of representatives of business and industry, vocational schools, former program graduates, and the language minority groups to be served.
- The training program and courses should be based on the proven principles and concepts of bilingual vocational education.
- Instructor training should be available at a time and place that is convenient for the trainees.
- Second language instruction should be provided as needed. (This includes ESL or instruction in the minority languages. All of this instruction is particularly designed to be relevant for bilingual vocational instruction.)
- A variety of training activities and teaching methods should be used. "Hands-on," experiential learning activities and bilingual training that not only increase learning, but also serve as instructional models for the trainees should be incorporated into the program.

EXHIBIT 7

PREREQUISITE COMPETENCIES FOR VOCATIONAL INSTRUCTORS IN BILINGUAL VOCATIONAL TRAINING PROGRAMS

Competency Category	Competency Level
LANGUAGE PROFICIENCY	
Trainees' Native Language	Level 3 on the Foreign Service Institute language proficiency rating scale—Minimum Professional
Speaking/Understanding	Able to participate effectively in most formal and informal conversations on practical, social, and professional topics
Reading/Writing	Able to read newspaper items addressed to the general reader, routine correspondence, reports, and technical materials in the special field, and write similar materials
English	Level 4 on the Foreign Service Institute language proficiency rating scale—Full Professional
Speaking/Understanding	Able to use the language fluently and accurately on all levels normally pertinent to professional needs
Reading/Writing	Able to read and write all styles and forms of the language
VOCATIONAL EXPERIENCE	
Formal Education/Degree	None
Certification	Current occupational credential, certificate, or the equivalent, when required by state
Work Experience	At least three years' working experience in the specific occupational area
CULTURAL AWARENESS/ATTITUDE	Sensitive to students' cultural attitudes toward learning Sensitive to students' cultural attitudes toward work Sensitive to students' cultural beliefs about social structures, including family and authority figures Sensitive to the cultural stigma associated with some words Motivated to teach

SOURCE: Adapted from Kirschner Associates (1981).

- The vocational ESL instructor training component should be closely coordinated with the bilingual vocational instructor training.
- Close coordination and good communication should exist between the instructor training institution and the vocational training centers.
- The staff should make active attempts to help the administration in the training institution understand, accept, and support the bilingual vocational instructor training program.
- The staff makes active efforts to promote general understanding and support in the vocational training centers for the philosophies and practices of bilingual vocational training.

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